CONTENTS OF SUPPLEMENT.

PERSONAL ..... 37
Obituary ..... 37
ENGINEERING SOCIETIES ..... 37
Coming Meetings ..... 37
TRADE PUBLICATIONS ..... 37
CONSTRUCTION NEWS:
Condensed List of Contracts Pending ..... 38
Railways ..... 38
Street and Electric Railways ..... 39
Electric Light and Power ..... 39
Bridges ..... 40
Buildings ..... 40
Water-Works ..... 41
Sewerage ..... 41
Garbage Disposal and Street Cleaning ..... 42
Streets and Roads ..... 42
Contract Prices ..... 42
Manufacturing Plants ..... 43
Miscellaneous Contracts ..... 44
U. S. Tropical Possessions ..... 44
Foreign Contracts and Export News ..... 44
INDUSTRIAL NOTES ..... 44

## PERSONAL.

Mr. W. W. Barrett, Commissioner of Irrigation and Forestry of North Dakota, has resigned.

Mr. Maurinus W. Gardner has been appointed Receiver of the Phenix Iron Foundry, of Providence, R. I.

Capt. David A. Irwin is detailed Professor of Military Science and Tactics at the Michigan Military Academy.

Mr. J. S. Norris has been appointed General Manager of the Baltimore & Lehigh Ry., to succeed Mr. W. A. Moore, resigned.

Mr. Fred. M. Jackson, General Manager of the Alabama Consolidated Coal & Iron Co., of Birmingham, Ala., has resigned.

Mr. Lewis Neilson, Assistant Secretary of the Pennsylvania R. R., has been elected Secretary, to succeed the late Mr. John C Sims.

Mr. W. W. Wilson, of Beaumont, Tex., Assistant General Manager of the Gulf, Beaumont & Kansas City R. R., has resigned on account of ill health.

Mr. A. K. Kirkpatrick was erroneously named as City Engineer of Kingston, N. Y., in a recent issue. Mr Geo. N. Bell still holds that position.

Mr. A. M. Shook, Second Vice-President of the Tennessee Coal, Iron & R. R. Co., of Birmingham, Ala., has been retired and that office is abolished.

Mr. G. D. Ball, Engineer of Maintenance of Way of the Brainerd & Northern Minnesota Ry., at Brainerd, Minn., has been appointed Superintendent of that road.

Mr. Hiero B. Herr, Civil Engineer, has been chosen Secretary of the Expert Commission of Chicago, Ill., which is planning a method for improving the Chicago River.

Mr. T. R. Browne, Master Mechanic of the Pennsylvania R. R., at Altoona, Pa., has accepted a position with the Westinghouse Air Brake Co., of Pittsburg, Pa.

Mr. George C. Smith, General Manager of the St. Louis-Louisville Division of the Southern Ry., has resigned to become Vice-President of the Security Investment Co., of Pittsburg, Pa.

Mr. J. A. Droge has been appointed Superintendent of the Pennsylvania and New York Division of the Lehigh Valley R. R., with headquarters at Sayre, Pa., succeeding Mr. O. O. Esser.

Lieut. Clarence C. Williams, Ordnance Department, U. S. A., has been ordered to New York city to take charge of the office of Inspector of Powder during the absence of Capt. Orin B. Mitcham.

Mr. Ralph E. Wells, late Manager of the Santa Fe, Prescott & Phoenix Ry., has been appointed General Manager of the San Pedro, Los Angeles & Salt Lake Ry., with office at Los Angeles, Cal.

Mr. R. C. Esson, Master Mechanic of the Southern Pacific Co., at Newark, Cal., has resigned, and Mr. F. L. Bates, Master Mechanic at San Francisco, Cal., has been given jurisdiction over that division.

Mr. Henry Molesworth, Civil Engineer, of London, is in this country for the purpose of inspecting the bridge material which is being manufactured by the American Bridge Co. for the Uganda State Ry., of Africa.

Mr. R. H. Hood, of the R. H. Hood Co., Engineers, 220 Broadway, New York, sailed for Europe on Jan. 22. Mr. Hood intends to make an extended tour around the world, which will take him about three or four years.

Mr. C. T. Schoen has resigned as President of the Pressed Steel Car Co. to become Chairman of the Board of Directors of that company, and is succeeded by Mr. F. N. Hoffstat, formerly Chairman of the Board of Directors.

Mr. H. D. Emerson, Vice-President and General Superintendent of the Ohio River & Lake Erie R. R., has resigned and is succeeded by Mr. Edwin E. Scranton, at present General Manager of the Alliance & Northern R. R.

Mr. Charles E. Roehl has been appointed Electrical Engineer of the Brooklyn Rapid Transit Co., of Brooklyn, N. Y. Mr. B. W. Folger, Jr., of Kingston, Ont., has been appointed Superintendent of the company's elevated system.

Mr. T. Hugh Boorman, late Manager of the New York Mastic Works, has been elected President of the National Contracting Co. and Vice-President and General Manager of the National Asphalt Brick & Tile Co., of 32 Broadway, New York.

Mr. E. A. Williams, formerly Mechanical Superintendent of the Minneapolis, St. Paul & Sault Ste. Marie Ry., has been appointed Superintendent of Rolling Stock, with headquarters at Montreal, Que., to succeed Mr. Roger Atkinson, resigned.

Mr. Dew M. Wisdom, formerly United States Indian Agent at Muskogee, Ind. Ter., has been appointed Chairman of the Commission to appraise the lands in the Chickasaw Nation, Ind. Ter., which will be used in the construction of the Arkansas & Choctaw R. R.

Mr. John Grant, Assistant General Manager of the Indianapolis St. Ry., of Indianapolis, Ind., has resigned to accept a similar position with the St. Louis Transit Co., of St. Louis, Mo. Mr. W. P. Cook, of Louisville, Ky., has been appointed Chief Electrician of the St. Louis Transit Co.

Mr. G. J. Bury, Superintendent of the Canadian Pacific R. R. at Fort William, Ont., will succeed Mr. J. A. Cameron, Superintendent at Cranbrook, B. C., who is obliged to relinquish his duties on account of ill-health. Mr. Bury will be succeeded by Mr. D. S. Ross, Assistant Superintendent at Winnipeg, Man.

Mr. William H. Dunn, formerly of the firm of Foley, Richards & Dunn, Contractors and Engineers, of Philadelphia, Pa., has associated himself with Mr. William R. Richards, under the firm name of William H. Dunn & Co., with office at 14 South Broad St., Philadelphia, where a Contracting and Engineering business will be carried on.

Lieut. Ernest P. Goodrich, Corps of Civil Engineers, U. S. N., and late First Assistant of the Civil Engineering Staff of the Brooklyn Navy Yard, has resigned to accept a position in a Brooklyn terminal company. Mr. Goodrich was born in Michigan and graduated from the University of Michigan in 1898. He passed a competitive examination at Washington for the position lately held in the Corps of Civil Engineers and he was sent to the Brooklyn Yard.

Mr. J. Miyake, Chief Engineer of the Kushiro Department of the Imperial Government Railway Hokkaido, of Sapporo, Japan, is visiting this country. With him are Mr. S. Sugiura, Engineer of Maintenance of Way of the Nippon Ry. Co., and Mr. Kintaro Yamagty, M. E., of the same road. The two latter gentlemen have headquarters at Tokio, Japan. They will visit Chicago, Pittsburg, New York and Boston before going to Europe, and will return in March or April, when they will spend some time in investigating American practice in track work, shop construction and equipment, and the design of coal and water stations, freight and passenger stations, etc.

## OBITUARY.

Mr. Theodore D. Randall, Civil Engineer, died at his home in Walton, N. Y., on Jan. 11, aged 76 years.

Mr. Adna Brown, President of the Springfield Electric Ry., of Springfield, Vt., died at his home in that city on Jan. 14.

Mr. John R. King, Master Mechanic of the Chattanooga Southern R. R., died at Chattanooga, Tenn., on Jan. 19, aged 61 years.

Mr. Andrew Reid Elliott, Civil Engineer, died in Waverly, Mass., on Jan. 24, aged 42 years. Mr. Elliott was at one time employed by the New York & New England R. R. and latter went into business for himself in Kansas City, Mo.

Mr. Samuel Forbes, formerly Superintendent of the Ashland, O., water-works, died in that city on Jan. 18 of heart failure. Mr. Forbes was one of the promoters of the Ohio & Big Sandy R. R. and was at one time Chief Engineer of the Chattaroi R. R.

Mr. Stephen Parson Myer, Contractor, died at Louisville, Ky., on Jan. 22, of pneumonia, aged 72 years. Mr. Myer built a number of railways in the South, but his greatest work was on the Colorado Midland Ry. He also built a section of the Chicago Drainage Canal.

Mr. Wm. T. Porter, President of the Water Commission of Wilmington, Del., died at his home in that city on Jan. 21. Mr. Porter was born in Beaufort, S. C., in 1829. Through his efforts the present water supply and drainage systems in the city of Wilmington, Del., were established. He was one of the United States Commissioners to the Paris Exposition in 1889.

Mr. J. C. W. Kline, Civil Engineer, died at his home in Blair, Neb., on Jan. 10. Mr. Kline was born in Cumberland, Md., in 1850. He was elected County Surveyor of Washington county, Neb., in 1873, and held that position until 1881, when he entered the Civil Engineering Department of the Chicago & Northwestern Ry., where he remained until five years previous to his death.

Mr. William B. Lawson, M. Am. Soc. C. E., died in Denver, Colo., on Jan. 27. Mr. Lawson was born in Illinois 55 years ago, and was educated in Alton, Ill. Later he entered the employ of the Chicago, Burlington & Quincy R. R. as a rodman, and rose to the position of Assistant Engineer of that system. At the time of his death he was Consulting Engineer of the Colorado Fuel & Iron Co.

Mr. Charles Parrott, a retired Manufacturer of Columbus, O., died at his home in that city on Jan. 22. Mr. Parrott was born in Dayton, O., 67 years ago. He was the principal owner of the Parrott Manufacturing Works of Dayton, and the organizer and for many years a Director of the Columbus Pipe Co. He also took active part in the organization and construction of the Columbus, Shawnee & Hocking R. R.

Mr. A. N. Spencer, Contractor, died at his home in Kansas City, Mo., on Jan. 24, aged 57 years. Mr. Spencer undertook the contract to build that part of the Choctaw, Oklahoma & Gulf Ry, from Oklahoma City to Fort Reno, Okla. Ter., and not being able to collect pay for his work, he assumed control of the line and managed it for two years, until its indebtedness had been liquidated. He also did considerable contracting work on the Kansas City Southern Ry. and on the Union Pacific R. R.

## ENGINEERING SOCIETIES.

### COMING MEETINGS.

ENGINEERS' CLUB OF PHILADELPHIA.
Feb. 2. Paper: "Chain Transmission of Power, and By-Products of Coke Ovens," by Charles Piez. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
Feb. 5. Paper: "The Relation of Specifications to Other Parts of the Contract for Construction Work," by John C. Wait. Secy. Junior Committee, Francis E. Frothingham, 12 W. 31st St., New York city.

FRANKLIN INSTITUTE.
Feb. 14. Meeting of the Mechanical and Engineering Section. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

ENGINEERS' CLUB OF COLUMBUS.
Feb. 16. Paper: "Power Station Equipment and Operation," by F. R. Brosius. Secy., H. M. Gates, 12½ North High St., Columbus, O.

AMERICAN INSTITUTE OF MINING ENGINEERS.
Feb. 19 to 23. Annual meeting at Richmond, Va. Secy., R. W. Raymond, 99 John St., New York city.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Feb. 21. Annual banquet at Pittsburg, Pa. Secy., Reginald A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

DOMINION AND ONTARIO LAND SURVEYORS.
Feb. 26 to 28. Annual meeting at Toronto, Ont. Secy., Major Sankey, City Hall, Toronto, Ont.

LAKE SUPERIOR MINING INSTITUTE.
March 5 to 8. Annual meeting at Houghton, Mich. Secy., F. W. Sperr, Michigan College of Mines, Houghton, Mich.

AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION.
March 12 to 14. Annual meeting in Chicago, Ill. Secy., L. C. Fritch, Monadnock Block, Chicago, Ill.

TECHNISCHER VEREIN VON PITTSBURG.—At the meeting, held on Jan. 25, a paper on "Coal-Loading Machines" was read by Mr. J. Etschmayer.

H. W. Bernard, Secy.

MINNEAPOLIS ENGINEERS' CLUB.—At the annual meeting, held on Jan. 14, the following officers were elected: President, W. H. Redfield; Vice-President, C. L. Pillsbury; Secretary and Treasurer, E. P. Burch.

TECHNICAL SOCIETY OF THE PACIFIC COAST.—The following officers were elected at the meeting, held on Jan. 18: President, Prof. E. D. Marx; Vice-President, David C. Henny; Secretary, Otto von Geldern; Treasurer, Edward T. Schild; Directors, Edward F. Haas, Samuel C. Irving, Adolf Lietz, Paul W. Prutzman and Luther Wagoner.

ENGINEERS' CLUB OF PHILADELPHIA.—At the meeting, held on Jan. 19, the following officers were elected for 1901: President, Henry Leffmann; Vice-President, Edwin F. Smith; Secretary, L. F. Rondinella; Treasurer, Geo. P. Gwilliam; Directors, Silas G. Comfort, Minford Levis and W. B. Riegner.

IOWA SOCIETY OF CIVIL ENGINEERS.—At the annual meeting of the society, held at Davenport, Jan. 15 to 18, the following officers were elected for the ensuing year: President, M. L. Newton, Waterloo; Vice-President, G. Davis, Cedar Rapids; Secretary and Treasurer, T. R. Warriner, Cedar Rapids; Directors, C. R. Allen, Ottumwa; Prof. A. V. Sims, Iowa City.

OHIO SOCIETY OR CIVIL ENGINEERS AND SURVEYORS.—At the annual meeting, held at Columbus, O., Jan. 21 to 23, the following officers were elected for the ensuing year: President, A. W. Jones, of Chillicothe; Vice-President, T. S. Niederheisen, of Ashland; Secretary and Treasurer, F. J. Cellarius, of Dayton; Trustees, C. N. Brown, of Columbus; J. B. Weddell, of Mansfield; R. E. Kline, of Dayton; William Wilson, of Niles; J. N. Harper, of Cincinnati. The program, which has been given in this column, contained some very interesting papers, but the attendance at the meeting was very poor.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.—At the tenth annual meeting, held on Jan. 21, the following officers were elected: President, Chas. Hermany; Vice-President, Henry Vogt; Secretary, Marshall Morris; Directors, J. M. Johnson, G. W. Shaw, Webster Gazlay, Chas J. Clarke, Pierce Butler and Kenneth McDonald. Regular meetings of the club are held on the third Monday of each month. The paper for the February meeting will be: "Recent Advances in Photography," by Mr. Pierce Butler.

ENGINEERS' CLUB OF ST. LOUIS.—At the meeting, held on Jan. 16, a paper on "The Purification of Sewerage" was read by Prof. J. L. Van Ornum. He first reviewed the development of the septic process, in practice and in theory, and then discussed the problems needing further study and how such investigations might be made. He considered the system beyond the experimental stage and that it had been thoroughly tried and proven a success. The author expected that, as the application of established principles are perfected and further investigations are made, its efficiency will become still greater and its field of application be extended.

## TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3½x8 ins., 6x9 ins., and 9x12 ins.)

STREET CARS.—J. G. Brill Co., Philadelphia, Pa. Paper; 9 × 6 ins.; pp. 24; illustrated.

Street cars which are convertible at will from open to closed cars, or vice versa, are described in this catalogue.

CONVEYING MACHINERY.—Steel Cable Engineering Co., 120 Liberty St., New York. Paper; 10 × 7½ ins.; pp. 42; illustrated.

This pamphlet is devoted largely to a handsomely printed and illustrated description of the pan and bucket conveyors manufactured by the above company for handling coal, ore, etc. The illustrations comprise details of construction and views of a number of notable installations.

DRAWING MATERIALS.—Eugene Dietzgen Co., 181 Monroe St., Chicago. Paper, oblong, 6¼×3¼ ins.; pp. 15; illustrated.

This catalogue illustrates and gives the prices of a great variety of material used by the engineer and draftsman, including some special forms.

RUBBER MATS, ETC.—Boston Belting Co., Boston, New York, Chicago, etc. Paper; 3½ × 6 ins.; pp. 12; illustrated.

This price-list describes rubber mats, matting, stair-treads, etc., and illustrates them in such manner as to plainly indicate their appearance and dimensions and cost.

THE TRACKBARROW.—Edward B. Peirce, 17 Belmont St., Lowell, Mass. Circular; illustrated.

This device is a wheelbarrow for track work, having a grooved wheel to run on the rail head, and the axle being placed so that the man can walk at the side instead of astride the rail.

NAZARETH PORTLAND CEMENT.—Charles Warner Co., Wilmington, Del. Celluloid, 4¾ × 2½ ins.

This is a neat memorandum book and calendar accompanied by a dozen or so pages of printed matter relating to the character and quality of the Portland cement manufactured by the company named.

SAWING MACHINES AND DRAWING TABLES.—R. E. Kidder, Worcester, Mass. Leaflets; illustrated.

These circulars separately describe the special drawing tables and easels, circular and universal sawing machines, speed lathes, and power hammers made by these works. Each is illustrated and the special features claimed are pointed out.

TANGENTIAL WATER-WHEELS.—Risdon Iron Works, San Francisco, Cal. Paper; 7 x 10 ins.; pp. 48; illustrated.

This is a catalogue of impulse water-wheels manufactured by the above company. A number of wheels of special design are shown. One of these, 30 ft. in diameter, runs at a speed of 65 revolutions per minute and develops 1,000 HP.

CORRESPONDENCE SCHOOL.—National Correspondence Institute, Washington, D. C. Department of Engineering. Paper, oblong, 9½ × 5¾ ins.; pp. 48; illustrated.

This special catalogue treats of the Department of Engineering, as conducted at this institution. It includes 18 separate courses in as many branches of engineering, describes the nature of each course, gives terms for the course, etc.

ROCK DRILLS.—The Canadian Rand Drill Co., Sherbrooke, Quebec, Canada. Paper; 6 × 9 ins.; pp. 8; illustrated.

This company, organized about ten years ago, has lately completed the erection of new works, and this pamphlet illustrates and describes their character. The views show a thoroughly modern equipment in all respects and a largely increased capacity for work.

RAILWAY SUPPLIES.—Kalamazoo Railway Supply Co., Kalamazoo, Mich. Paper; oblong; 9 × 6 ins.; pp. 112; illustrated.

About everything used in railway construction and operation is here illustrated, described and priced, from a double velocipede hand-car to the minor tools. The list includes many special appliances and tools, and also covers warehouse, dock and plantation supplies.

PNEUMATIC ROCK DRILL.—Chicago Pneumatic Tool Co., 632 Monadnock Block., Chicago, Ill. Paper; 9 x 12 ins.; pp. 4; illustrated.

This circular describes the Chicago-Schmucker pneumatic drill for rock excavation. Its special feature is the rapidity of its action, the drill making 4,000 strokes per minute, with a movement of 1¾ ins. An air motor rotates the bit and also the spiral for removing refuse from the hole.

DRAWING INSTRUMENTS.—A. S. Aloe Co., 517 Olive St., St. Louis, Mo. Paper, 6¼ × 9½ ins.; pp. 4; illustrated.

This circular is an illustrated list of pocket cases of instruments, in which the dividers are so shaped as to be readily adjusted by the fingers holding them, and the compasses have a "lazy-tong" extension piece which keeps the pen vertical at the full spread of the instrument. The ruling pen has one blade pivoted to facilitate cleaning.

ELECTRIC AERIAL CABLEWAYS.—Consolidated Telpherage Co., 20-22 Broadway, New York. Circulars 8, 9, 10; paper, 6 × 9 ins.

In the form of handsomely illustrated circulars this company describes its appliances for automatically conveying goods of various kinds for considerable distances. This is done by running upon a cableway an electric motor and carrier, operated somewhat as a trolley system of railway is operated. This system is adapted to use in factories of all kinds for the handling of lighter goods; in rolling mills, blast furnaces, saw mills, wire mills and on plantations, in hotels for trunks, etc., and the express service of railways and steamer lines.

PILE-DRIVING MACHINERY.—Vulcan Iron Works, 59 Milwaukee Ave., Chicago, Ill. Paper; 5 × 6⅝ ins.; pp. 32; illustrated.

The 1900 catalogue of this firm covers all manner of pile-driving machinery and fittings. For foundation pile driving there is a swivel driver, revolving upon a turntable which works upon a bent 60-lb. rail instead of the old flat rail. The township pile-driver is another form for use on small bridges and where light driving is required; the weight of hammer ranges from 500 to 1,200 lbs. The contractor's driver is a heavier apparatus with the hammer weighing from 1,500 to 5,200 lbs. The Warrington steam pile-driver is a direct-acting driver, which is guaranteed as simple, strong, positive in action and effective. It drives piles without the use of bands, as the driver rests directly upon the pile in operation. The list includes patent cap for pile driving, pipe followers, saws for cutting off piles under water, hoisting engines, and a number of other fittings and appliances. Dimensions, weights and prices are generally noted.

## CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

| Bids to be opened. | Work. | Place. | See Eng. News. |
|---|---|---|---|
| Jan. 31. | Dredging, etc., Mobile Ala. | | Jan. 3 |
| | Advertised, Eng. News, Jan. 3 to 24. | | |
| Jan. 31. | Dredging, Matanzas, Cuba. | | Dec. 13 |
| | Advertised, Eng. News, Dec. 13 to Jan. 3. | | |
| Jan. 31. | Brick paving (8,000 yds.), Alexandria, La. | | Jan. 10 |
| | Advertised, Eng. News, Jan. 10 and 17. | | |
| Jan. 31. | Dock, Milwaukee, Wis. | | Jan. 31 |
| Jan. 31. | Pipe sewers (10 miles), Dedham, Mass. | | Jan. 31 |
| Feb. 1. | Iron bridge, Neosho, Mo. | | Jan. 31 |
| Feb. 1. | Brick paving, Saginaw, Mich. | | Jan. 31 |
| Feb. 1. | Sewers, Glenville, O. | | Jan. 3 |
| Feb. 1. | Iron castings, Boston, Mass. | | Jan. 17 |
| Feb. 1. | Heating plant, Charlotte, N. C. | | Jan. 17 |
| Feb. 1. | Building (mfg. plant), Lynchburg, Va. | | Jan. 17 |
| Feb. 1. | Building (mfg. plants), Toledo, O. | | Jan. 17 |
| Feb. 1. | Electric lighting, Ambler, Pa. | | Jan. 17 |
| Feb. 1. | Sewers (12 miles), Union, S. C. | | Jan. 17 |
| | Advertised, Eng. News, Jan. 17 and 24. | | |
| Feb. 1. | Steel bridges (2), Helena, Mont. | | Jan. 17 |
| Feb. 1. | Foundry building, Cincinnati, O. | | Jan. 24 |
| | Advertised, Engineering News, Jan. 24. | | |
| Feb. 1. | Laying water mains, etc., Cape May, N.J. | | Jan. 24 |
| Feb. 1. | Grading railway (3 mls), Louisiana. | | Jan. 24 |
| Feb. 2. | Water pipe and castings, Cuyahoga Falls, O. | | Jan. 24 |
| Feb. 2. | Sluice gates (6), Victoria, B. C. | | Jan. 24 |
| Feb. 2. | Corporation cocks, Washington, D. C. | | Jan. 17 |
| Feb. 2. | Barracks, etc., Fort Fremont, S. C. | | Jan. 10 |
| Feb. 2. | Bridge abutments, Winnipeg, Man. | | Jan. 31 |
| Feb. 4. | Bridge, Astoria, Ore. | | Jan. 31 |
| Feb. 4. | Removing street dirt, Albany, N. Y. | | Jan. 31 |
| Feb. 4. | Brick paving ($18,000), Titusville, Pa. | | Jan. 31 |
| Feb. 4. | Electric lighting, Albany, N. Y. | | Jan. 31 |
| Feb. 4. | Sewers, Toledo, O. | | Jan. 31 |
| Feb. 4. | Plans for court house, Taylorville, Ill. | | Jan. 3 |
| Feb. 4. | Bridge, Waco, Tex. | | Jan. 17 |
| Feb. 4. | Officers' quarters, San Francisco, Cal. | | Jan. 17 |
| Feb. 4. | Sewers, Great Falls, Mont. | | Jan. 24 |
| Feb. 4. | Paving, Toledo, O. | | Jan. 24 |
| Feb. 4. | Sewer work, etc., Atlanta, Ga. | | Jan. 24 |
| Feb. 4. | Sidewalk work, Atlantic City, N. J. | | Jan. 24 |
| Feb. 5. | Dynamo, etc., Perham, Minn. | | Jan. 24 |
| Feb. 5. | Steel bridges (3), Santiago-de-Cuba. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 3, 10 and 24. | | |
| Feb. 5. | Life saving station, Barnegat, N. J. | | Jan. 24 |
| Feb. 5. | Addition to high school, Columbus, O. | | Jan. 24 |
| Feb. 5. | Plan for jail, Crowley, La. | | Jan. 24 |
| Feb. 5. | Court house, Valdosta, Ga. | | Jan. 24 |
| Feb. 5. | School bonds ($85,000), Columbus, O. | | Jan. 17 |
| Feb. 5. | Court house, Starkville, Miss. | | Dec. 27 |
| Feb. 5. | High school building, Crowley, La. | | Jan. 31 |
| Feb. 5. | Completing dam, Waterbury, Conn. | | Jan. 31 |
| Feb. 5. | Naval supplies, Norfolk, Va. | | Jan. 31 |
| Feb. 6. | Railway cars, etc. (Chili), Washington. | | Nov. 29 |
| Feb. 6. | Improving drainage, Alexandria, La. | | Jan. 10 |
| | Advertised, Eng. News, Jan. 10 to 31. | | |
| Feb. 6. | Boiler, Sleepy Eye, Minn. | | Jan. 24 |
| Feb. 6. | School house, Riverview, Ont. | | Jan. 24 |
| Feb. 6. | Quarantine building, Lewes, Del. | | Jan. 24 |
| Feb. 6. | Bridge, Riverside, Cal. | | Jan. 31 |
| Feb. 6. | Office building, Tompkinsville, N. Y. | | Jan. 31 |
| | Advertised, Engineering News, Jan. 31. | | |
| Feb. 6. | Water bonds, Greenfield, O. | | Jan. 31 |
| Feb. 7. | Library building, New York, N. Y. | | Jan. 24 |
| Feb. 7. | Bank protection, New Orleans, La. | | Jan. 10 |
| | Advertised, Eng. News, Jan. 10 to 31. | | |
| Feb. 7. | Sewer ($23,000), Findlay, O. | | Jan. 3 |
| Feb. 7. | Street grading, New York, N. Y. | | Jan. 31 |
| Feb. 8. | Steel bridge, Cedar Rapids, Ia. | | Jan. 31 |
| | Advertised, Engineering News, Jan. 31. | | |
| Feb. 8. | Plans for school, New Haven, Conn. | | Jan. 10 |
| Feb. 8. | Steam vessel, San Francisco, Cal. | | Jan. 17 |
| Feb. 8. | Hauling water pipe, etc., Troy, N. Y. | | Jan. 24 |
| Feb. 8. | Dam and reservoir, Troy, N. Y. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 and 31. | | |
| Feb. 8. | Laying water mains, etc., St. Louis, Mo. | | Jan. 24 |
| Feb. 8. | Discharge valves (2), St Louis, Mo. | | Jan. 24 |
| Feb. 8. | Special castings, Troy, N. Y. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 and 31. | | |
| Feb. 8. | Water pipe, Troy, N. Y. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 and 31. | | |
| Feb. 8. | Pumping engines (2), Pittsburg, Pa. | | Jan. 24 |
| Feb. 8. | Cement, Troy, N. Y. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 and 31. | | |
| Feb. 8. | Sewer pipe, brick, etc., Santiago-de-Cuba. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 and 31. | | |
| Feb. 8. | Water pipe, etc., Minneapolis, Minn. | | Jan. 31 |
| Feb. 8. | Building materials, Philadelphia, Pa. | | Jan. 31 |
| Feb. 9. | Gymnasium building, Lexington, Ky. | | Jan. 31 |
| Feb. 9. | Cement paving, Philadelphia, Pa. | | Jan. 31 |
| Feb. 9. | Dynamos, generator, etc., Batley, Eng. | | Jan. 24 |
| Feb. 9. | Wooden bridge, Victoria, B. C. | | Jan. 24 |
| Feb. 9. | Fire house, Cleveland, O. | | Jan. 24 |
| Feb. 10. | Water-works, Mondovi, Wis. | | Jan. 10 |
| Feb. 11. | Gun carriages, Pittsburg Landing, Tenn. | | Jan. 10 |
| Feb. 11. | Town hall, Jeffersonville, O. | | Jan. 17 |
| Feb. 11. | Bridges, Salt Lake City, Utah. | | Jan. 17 |
| | Advertised, Eng. News, Jan. 17 to 31. | | |
| Feb. 11. | Pipe sewrs, Greenwich, Conn. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 to Feb. 7. | | |
| Feb. 11. | Pumping engine, etc., Atlantic City, N. J. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 and 31. | | |
| Feb. 11. | Water-works, Ottumwa, Ia. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 to Feb. 7. | | |
| Feb. 11. | Tunnel (500 ft.) Greenwich, Conn. | | Jan. 24 |
| | Advertised, Eng. News, Jan. 24 to Feb. 7. | | |
| Feb. 11. | Heating plant, Galesburg, Ill. | | Jan. 24 |
| Feb. 11. | Steel foundry building, Cincinnati, O. | | Jan. 24 |
| | Advertised, Engineering News, Jan. 24. | | |
| Feb. 11. | Bridge, Indianapolis, Ind. | | Jan. 31 |
| Feb. 11. | Water filtration, etc., Philadelphia. | | Jan. 31 |
| | Advertised, Engineering News, Jan. 31. | | |
| Feb. 11. | Well for water supply, Belle Plaine, Minn. | | Jan. 31 |
| Feb. 11. | Extending garbage crematory, Atlantic City. | | Jan. 31 |
| Feb. 11. | Surveys, Olympia, Wash. | | Jan. 31 |
| Feb. 11. | Hospital building, Fort Slocum, N. Y. | | Jan. 31 |
| Feb. 12. | County bridges, Blair, Neb. | | Jan. 31 |
| Feb. 12. | Street sprinkling, St. Louis, Mo. | | Jan. 31 |
| Feb. 12. | Jail building, Mt. Vernon, Ga. | | Jan. 31 |
| Feb. 12. | Electric lighting, York, Pa. | | Jan. 31 |
| Feb. 12. | Paving, Cleveland, O. | | Jan. 24 |
| Feb. 12. | Naval supplies, Washington, D. C. | | Jan. 24 |
| Feb. 12. | Aqueduct, Columbus, O. | | Jan. 17 |
| Feb. 12. | Dredging, etc., Columbus, O. | | Jan. 17 |
| Feb. 14. | Well, Lancaster, Wis. | | Jan. 24 |
| Feb. 14. | Church building, Danville, Ill. | | Jan. 31 |
| Feb. 14. | Business building, Memphis, Tenn. | | Jan. 31 |
| Feb. 15. | Water-works, Woodstock, Va. | | Jan. 31 |
| | Advertised Eng. News, Jan. 31 and Feb. 7. | | |
| Feb. 15. | School house, Renville, Minn. | | Jan. 31 |
| Feb. 15. | Sale of water-works, Seneca Falls, N. Y. | | Jan. 24 |
| Feb. 15. | Equipment (mfg. plants), Toledo, O. | | Jan. 17 |
| Feb. 15. | Sewerage system, Delaware City, Del. | | Jan. 17 |
| | Advertised, Eng. News, Jan. 17 to Feb. 7. | | |
| Feb. 15. | Water supply, Grand Rapids, Mich. | | Nov. 22 |
| | Advertised. Eng. News, Nov. 22 to Feb. 7. | | |
| Feb. 16. | Drainage work, Alexandria, La. | | Jan. 17 |
| Feb. 16. | Sewage pumping plant, Washington, D.C. | | Jan. 24 |
| | Advertised, Engineering News, Jan. 24. | | |
| Feb. 16. | Telephone cable system, Washington, D.C. | | Jan. 24 |
| Feb. 16. | Railway trestle, Portsmouth, N. H. | | Jan. 31 |
| Feb. 16. | Library building, Duluth, Minn. | | Jan. 31 |
| Feb. 16. | Office building, Norfolk, Va. | | Jan. 31 |
| Feb. 18. | Repairing light-house, Mobile, Ala. | | Jan. 31 |
| Feb. 18. | Sewage disposal beds, Plainfield, N. J. | | Jan. 31 |
| | Advertised, Engineering News, Jan. 24. | | |
| Feb. 18. | Paving, Toledo O. | | Jan. 24 |
| Feb. 18. | Dam work, Sacramento, Cal. | | Jan. 17 |
| Feb. 19. | Railway, bridges, etc., England. | | Jan. 24 |
| Feb. 19. | Beacons (2), Mobile, Ala. | | Jan. 31 |
| Feb. 20. | Court house, Adel, Ia. | | Jan. 31 |
| Feb. 20. | Library building, Emporia, Kan. | | Jan. 31 |
| Feb. 20. | Water filters, etc., Louisville, Ky. | | Jan. 24 |
| | Advertised, Eng. News, Dec. 13 to Feb. 14. | | |
| Feb. 20. | Electric plant, Lake Providence, La. | | Jan. 17 |
| Feb. 20. | Water-works, etc., Lake Providence, La. | | Jan. 17 |
| Feb. 20. | Paving, Marion, Ind. | | Jan. 17 |
| Feb. 20. | Brick paving, Ripon, Wis. | | Jan. 3 |
| Feb. 20. | Excavating, etc., Chicago, Ill. | | Jan. 3 |
| Feb. 21. | Powder works, Rio de Janeiro, Brazil | | Sept. 26 |
| Feb. 21. | Straightening River, Utica, N. Y. | | Jan. 31 |
| | Advertised, Eng. News, Jan. 31 to Feb. 14. | | |
| Feb. 25. | School house, Cleveland, O. | | Jan. 31 |
| Feb. 25. | Breakwater superstructure, Buffalo, N. Y. | | Jan. 31 |
| | Advertised, Eng. News, Jan. 31 to Feb. 21. | | |
| Feb. 25. | City Hall, Birmingham, Ala. | | Jan. 24 |
| Feb. 26. | Court house, Waterloo, Ia. | | Jan. 31 |
| Feb. 26. | Water-works, Laurel, Miss. | | Jan. 31 |
| | Advertised, Eng. News, Jan. 31 and Feb. 7. | | |
| Feb. 28. | Dredging, Newport, R. I. | | Jan. 31 |
| | Advertised, Eng. News, Jan. 31 to Feb. 21. | | |
| Feb. 28. | Hydraulic dredge, Galveston, Tex. | | Jan. 31 |
| | Advertised, Eng. News, Jan. 31 to Feb. 21. | | |
| Feb. 28. | Observation tower, Wilmington, N. C. | | Jan. 31 |
| | Advertised, Eng. News, Jan. 31 to Feb. 21. | | |
| Feb. 28. | Engines (Wellington, N.Z.), London, Eng. | | Dec. 6 |
| Feb. 19. | Pumping engine, Brookline, Mass. | | Dec. 27 |
| | Advertised, Eng. News, Dec. 27 to Jan. 10. | | |
| Mar. 1. | Rice drying machinery, Navaro, Italy. | | Sept. 27 |
| Mar. 1. | Equipment (mfg. plants), Lynchburg, Va. | | Jan. 17 |
| Mar. 1. | Plans for dormitory, Athens, Ga. | | Jan. 17 |
| Mar. 1. | Steel bridge, Peshtigo, Wis. | | Jan. 17 |
| Mar. 1. | Steel bridge, Winnipeg, Man. | | Jan. 31 |
| Mar. 1. | Electric machinery, West Chester, Pa. | | Jan. 31 |
| Mar. 1. | Electric machinery, Jackson, Tenn. | | Jan. 31 |
| Mar. 2. | Wharf, Bremerton, Wash. | | Jan. 31 |
| Mar. 2. | Light-house tender, Washington, D. C. | | Jan. 31 |
| Mar. 2. | Gates and guard houses, Bremerton, Wash. | | Jan. 31 |
| Mar. 2. | Electric cars (42), Bournemouth, Eng. | | Jan. 24 |
| Mar. 4. | Sale of water-works, Mount Vernon, N.Y. | | Jan. 24 |
| Mar. 4. | Court house, Pomeroy, Wash. | | Jan. 31 |
| Mar. 4. | Steel wagon bridge, Miles City, Mont. | | Jan. 31 |
| Mar. 4. | Sewers (15,000 ft.), Oklahoma City, O. T. | | Jan. 31 |
| Mar. 5. | Electric plant franchise, Ripon, Wis. | | Jan. 31 |
| Mar. 6. | Gravel road (12 miles), Atlantic City, N.J. | | Jan. 17 |
| | Advertised, Eng. News, Jan. 17 to Feb. 14. | | |
| Mar. 6. | Sale of water-works, White Plains, N. Y. | | Jan. 24 |
| Mar. 7. | Dredge and snagboat, St. Augustine, Fla. | | Jan. 31 |
| | Advertised, Eng. News, Jan. 31 to Feb. 21. | | |
| Mar. 9. | Magazine buildings, Bremerton, Wash. | | Jan. 31 |
| Mar. 16. | Saw mill, etc., Mare Island, Cal. | | Jan. 24 |
| Mar. 25. | Sewerage system, Basford, England. | | Sept. 13 |
| Apr. 2. | Pumping engine, etc., Kenosha, Wis. | | Jan. 17 |
| | Advertised, Eng. News, Jan. 17 and 24. | | |
| Apr. 8. | Electric meters, Launceston, Tasmania. | | Jan. 31 |
| May 9. | Bridge, Indo-China (Paris) | | Jan. 10 |
| Apr. 12. | Bridge, Goldendale, Wash. | | Jan. 31 |
| May 10. | Harbor improvements, Rosario, Argentina. | | Nov. 1 |
| July 1. | Quay, Indo-China (Paris) | | Jan. 10 |
| July 1. | Electric railways, Tarbes, France. | | Jan. 24 |
| Aug. 31. | Sewerage system, St. Petersburg, Russia. | | Dec. 6 |
| No date. | Masonry dam, Waterbury, Conn. | | Jan. 10 |
| | Advertised. Eng. News, Jan. 10 to Feb. 7. | | |
| No date. | Bridge, Slatington, Pa. | | Jan. 31 |

## RAILWAYS.

AKRON & NILES.—This company has been incorporated in Ohio, with $15,000 capital stock, to build a road between the points named. Chas. W. French, O. D. Crouch and A. C. Hurd are interested.

ALPENA, GAYLORD & WESTERN.—Wm. M. Durand, Pres., Detroit, Mich., informs us that a complete right of way has been secured for the company's proposed road between Alpena and Gaylord, Mich., and that Clarence M. Stephens, Ch. Engr., has already begun the final survey for the road and not J. N. Goodburne, as has been reported.

ANDERSON & BELLA VISTA.—It is stated that J. D. Terry, Sacramento, Cal., the owner of this road, will extend the line from Anderson into Trinity county. Surveys will soon be made. The road will traverse a mountainous country, and will be used for hauling the timber from the mountains and for conveying ores to the new smelters, which will soon be built along the proposed line.

ATCHISON, TOPEKA & SANTA FE.—The John H. Kirby Tie Co., of Houston, Tex., is said to have closed a contract with this company for 7,000,000 ties, and considerable piling, to be delivered within the next five years. It is estimated that 250,000,000 ft. of timber will be necessary to fill the contract.

BALTIMORE & OHIO.—Preparations are reported as being made for the construction of the proposed short line from Littleton, W. Va., to Barnesville, O. The line will be about 60 miles in length, and will necessitate the erection of a bridge over the Ohio River near Woodlands. J. M. Graham, Ch. Engr., Baltimore, Md.

CALIFORNIA.—Charles J. George, of Los Angeles, is reported as stating that a company has been organized in Los Angeles, with $800,000 capital stock, for the purpose of building a broad-gage railway from Williams to Jerome. The road is to be completed within a year. It will run from the end of the railway operated by the Saginaw Lumber Co., from Williams into the timber belt, 14 miles distant, to Jerome, and will eventually be extended to Globe.

CANADA.—The Civic Level Crossing Committee of Montreal, Que., has offered to give $500,000 towards the elevation of the Grand Trunk Ry. tracks in that city.

CHICAGO & ALTON.—Extensive improvements on the main line between Chicago and Bloomington will be commenced in the spring, and will include a considerable reduction of grades. On other parts of the line trestles of creosoted timber with ballasted floors are to be built. M. W. Baldwin, Ch. Engr., Chicago.

CHICAGO & NORTHWESTERN.—Contracts are reported let for the construction of 18 miles of road from the Ashland Division of this road, at Pelican, Wis., to Grandon.

CHICAGO, MILWAUKEE & ST. PAUL.—A contract is reported let to McIntosh Bros., contractors, of Milwaukee, Wis., for building an extension of this road from Iron Mountain, Mich., to Quinnesec. The grading will be started at once, and the work finished about May. The road will tap the mines and important business centers along the route.

CUMBERLAND PLATEAU.—A charter has been granted this company in Tennessee, with $100,000 capital stock, for the purpose of building and operating a road from Johnson's Point, in Cumberland county, to Jamestown, Fentress county. John F. McNutt, W. J. Hodges, J. B. Johnson and others are interested.

FT. WORTH & RIO GRANDE.—Surveyors of this company are reported to be running a line from Brownwood to Ft. McKavitt. H. C. Wicker, Pres. and Gen. Supt., Ft. Worth, Tex.

GRAND TRUNK.—H. A. Woods, Engr., in charge of Construction Department, Detroit, Mich., writes us that contracts for the proposed extension of the double track on the Western Dvision for a distance of 100 miles, will be let in February. The surveys are completed and rights of way secured. This work will be in charge of the Construction Department.

GULF, COLORADO & SANTA FE.—The San Angelo branch of this road is to be extended westward, according to reports. Surveyors are now in the field. The new line will probably be to Pecos City, Tex., about 135 miles west from San Angelo. C. F. W. Felt, Ch. Engr., Galveston.

INDIANA, DECATUR & WESTERN.—Plans are now being drawn up for an extension of the company's tracks from Decatur to Springfield, a distance of about 40 miles. The construction will probably be built in the spring. G. H. Graves, Supt., Indianapolis, Ind.

KANSAS CITY, MEXICO & ORIENT.—A concession has been granted this company by the Governor of Chihuahua, Mex., for permission to build across that state. A. E. Stillwell, Pres., Kansas City, Mo., is said to be in Mexico arranging for the construction of the line from Port Stilwell on the Pacific Coast to Presidio del Norte, on the Rio Grande border.

LAKE CHARLES & RICE BELT.—Incorporated in Louisiana, with a capital stock of $1,000,000, to build a road from Lake Charles to New Orleans. The preliminary survey has been made as far east as Gueydan, and it is said that the road is to be completed to Abbeville during the coming summer. It will traverse a rich rice-growing district of Louisiana, and will be about 200 miles in length. C. A. Lowery, Pres.; H. C. Drew, Vice-Pres., and A. V. Eastman, Mgr., New Orleans.

LITTLE ROCK SOUTHERN.—The Little Rock & New Orleans Construction Co. has been incorporated in New Jersey, with a capital stock of $750,000, for the purpose of building this newly incorporated road, which is to run from Little Rock, Ark., to Bastrop, La., where it will connect with the New Orleans & Northwestern Ry., running to Natchez, 102 miles. The project is said to be backed by the Illinois Central Ry. P. T. Witherop, Titusville, Pa.; W. S. McCain and Howard Adams, Little Rock, are interested in this road.

NEW YORK.—Reports state that a bill will shortly be introduced in the legislature providing for the establishment of an all-freight railway, to be owned and operated by the state, from Buffalo to Albany. It has been estimated that the road will cost about $20,000 a mile, or $9,000,000.

OKLAHOMA CITY & SOUTHEASTERN.—W. W. Storm, Vice-Pres., Oklahoma City, Okla., writes us that the Chief Engineer has started to locate this road from Oklahoma City to Coalgate, Ind. Ter. It is the intention of the company to push the work as fast as possible. The road will run from Kiowa, Kan., via Oklahoma City, to Shreveport, La. C. S. Jones, Pres., Oklahoma City.

ORANGE & NORTHWESTERN.—Geo. W. Bancroft, Orange, Tex., informs us that surveys for this road have been started. The construction capital is secured, but no contracts have been let. The road will run from Orange to Buna, Tex., about 30 miles. G. Bedell Moore, Pres., and J. H. Maxcey, Ch. Engr., Orange.

PINE BLUFF ARKANSAS RIVER.—G. L. Morris, Gen. Mgr., Pine Bluff, Ark., writes us that surveys for the 12-mile extension of this road have been completed, and that rights of way are secured. Contracts will be let in the near future. E. J. Nichols, Ch. Engr., Pine Bluff.

RIO GRANDE SANGRE DE CRISTO.—The contract for building this newly incorporated road, which will be a part of the Denver & Rio Grande System, is reported to have been let to Chapman & Wharton. The road will run from Moffat Station in the San Luis Valley up the side of the Sangre de Cristo range of mountains for a distance of 18 miles to the mining camp of Crestone. Several thousand ties have been cut and the work will be started at once.

ST. LOUIS, CAPE GIRARDEAU & SOUTHERN.—Louis B. Hauck, Cape Girardeau, Mo., writes us that contracts for this road will be let in February. The line will be 45 miles long, and will run from Cape Girardeau to Perryville, via Jackson and Oak Ridge. James F. Brooks, Ch. Engr., Cape Girardeau.

TENNESSEE.—Reports from Knoxville state that the East Tennesse Iron & Coal Co. will build a line of railway from near Buckeye to a point near Lafollette, through a tract of coal land recently acquired. The construction work is to be started in February.

UNION PACIFIC.—Reports state that the contract for a cut-off from Cheyenne, Wyo., south on the Denver line, a distance of 18 miles, has been let. The work will be started at once, and will be completed about Sept. 1. The cut-off will save about one mile between Cheyenne and Denver, and will do away with the Athol Hill.

## STREET AND ELECTRIC RAILWAYS.

MANCHESTER, N. H.—E. G. Whitney, Manchester, writes us that surveys will be made in the spring for a dam to be used in developing the power for an electric road from Saco to Steep Falls, about 20 miles. The power will also be used for commercial purposes. A plant to generate from 2,500 to 5,000 HP. is to be erected. Albert Merrill is also interested.

ALBANY, N. Y.—The Rochester & Eastern Rapid Ry. has been incorporated, with $500,000 capital stock, to build an electric street road from the easterly end of the Monroe Ave. line of the Rochester Ry., in Brighton, to Geneva, with a branch line from Pittsford to Fairport, having a total length of about 45 miles. Eugene H. Satterlee, Pittsford; Oscar N. Crane, Canadaigua; Spencer F. Lincoln, Naples, and John F. White, Buffalo, are interested.——It is reported that the Albany & Hudson Ry. & Power Co. will build a spur line from Nassau to Brainard Station, on the Chatham & Lebanon Valley R. R. Maurice Hoopes, Gen. Mgr., Valatie, N. Y.

CORTLAND, N. Y.—It is stated that the Cortland & Homer Traction Co. will extend its road to Little York during the summer. Chas. Gerrard, Ch. Engr.

OSWEGO, N. Y.—F. Arnold, Mgr., Oswego Traction Co., writes us that the company does not contemplate building any extensions to its line at present, but is now engaged in building about two miles of additional feeder line and in renewing 2½ miles of overhead work. Two new closed cars are to be purchased.

BOYERTOWN, PA.—Reports state that the Oley Valley Electric Ry. has let contracts to the Henry Fry Lumber Co. for furnishing 65,000 ties and 2,200 poles, to William Wharton, Jr., & Co., of Philadelphia, for the rails, and to the Cambria Iron Co., Brill & Co., Philadelphia, and Jackson & Sharp, of Wilmington, Del., for the cars to be used on its proposed electric road between Boyertown and Reading. The contracts for the power plant and equipment have not been awarded.

NORRISTOWN, PA.—The Lansdale & Norristown Electric Ry. has been organized, with a capital stock of $60,000, for the purpose of building a line from Lansdale to Norristown, via Centre Square, Franklinville and Penn Square. S. S. Emery, Pres., Butztown; Geo. H. Young, Bethlehem, and Geo. Hallman, Lower Nazareth, are also interested.

BEAVER, PA.—Local papers state that the Beaver Valley Traction Co. will expend about $100,000 in the improvement of its property at Rochester during the coming year. Several tracks will be laid at various points. H. Supples, Ch. Engr.

PITTSBURG, PA.—E. W. Davis, Ch. Engr., Carnegie, McDonald & Cannonsburg St. Ry., 241 South Hiland Ave., informs us that surveys are made for the company's proposed road, and rights of way are secured. Contracts will probably be awarded in a few weeks. The road will be operated by electricity and will be 20 miles in length, extending through Carnegie to Oakdale, Noblestown, Champion, Sturgeon to Cannonsburg. Edward McDonald, Pres., McDonald, Pa.

STROUDSBURG, PA.—Frank H. Smith, Pres., Stroudsburg Pass Ry., Stroudsburg, informs us that the company's steam road, which is at present 2½ miles in length, is to be extended about 1½ miles and converted into an electric line.

BALTIMORE, MD.—The county commissioners have granted a franchise to the Maryland Electric Ry. for the construction of an electric railway on the Philadelphia road from the eastern boundary of this city to the Hartford county line, near Zeppa station, on the Baltimore & Ohio R. R. Unless five miles of the road are built in 18 months the franchise is void. The company controls the proposed Baltimore, Halethorpe & St. Denis Ry., which is to run from this city to the vicinity of Elkridge Landing, at the boundary line of Baltimore & Howard counties, about eight miles. Robert S. Carswell, Pres., 106 South Calvert St., Baltimore.

UNION, S. C.—The council has granted a franchise to T. C. Duncan and his associates for an electric railway through the town. The road will run through the town to the Excelsior Knitting Mills, to the Buffalo Mills and to the Monarch Mills. Work is to be started by July 1 and must be completed within one year.

SHREVEPORT, LA.—The Superintendent of the Shreveport Belt Ry. Co. writes us that on account of considerable street paving at this point the company contemplates rebuilding about two miles of track, using 7-in. Shanghi Tee rail. In order to confine the expense of street paving, it is desired to eliminate the use of crossties, and confine the width of the roadbed to the gage of the present track, which is standard gage, from inside of ball of rail. Information is desired with details of the latest recommended practice for this character of construction. The concrete, according to city specifications, is to be 7 ins. deep. It is proposed to do a considerable portion of the work before the city undertakes its part, and the company wishes to be advised as to the practice of tieing the rails together, before the street is ready for reception of brick.

OBION, TENN.—The stockholders of the Obion & Tiptonville Rapid Transit R. R. recently held a meeting in this place and ordered the survey for the company's road started at once The road will be operated by electricity and will extend from this place to Tiptonville, via Glass, and will extend from this place to Tiptonville, via Glass, that the road will be ready for operation by about Oct. 1.

AKRON, O.—The Northern Ohio Traction Co. is planning to build extensions of its line from Kent to Ravenna, six miles, and from Akron to Canton, 22 miles. The latter road will pass Long Lake and Turkeyfoot Lake, where the company will establish summer resorts. The surveys are to be started at once, and it is expected to have the roads ready for operation by summer. To meet with these improvements the company will increase its capital stock by $1,000,000. L. E. Beilstein, Gen. Mgr.

CINCINNATI, O.—The Hamilton, Glendale & Cincinnati Traction Co. has been incorporated with $250,000 capital stock, for the purpose of building a street railway system connecting those towns. Work is to be started as soon as the weather permits. W. P. McCarty, Wm. S. Mundsell and George Kelley are interested.——C. B. Simrell, attorney for the Covington & Erlanger Electric St. Ry., is preparing to commence proceedings for condemnation of the rights of way for the company's proposed nine miles of road. The road is to be built in 60 days, work starting soon after Feb. 1.

TOLEDO, O.—The Toledo, Napoleon & Defiance R. R. has been incorporated with $25,000 capital stock, by Chas. E. Sutton, Richard Hattersby and Holland C. Webster, for the purpose of building and operating an electric road from this city to Defiance, through Lucas, Henry and Defiance counties.——The Toledo, Waterville & Southern Ry. has been incorporated and will build an electric railway between Toledo and Napoleon. The capital stock is $25,000. Harry E. King, Thomas H. Tracy and James R. Murphy are interested.

TERRE HAUTE, IND.—C. B. Kidder, Terre Haute, writes us that nothing definite has been done towards building the extension of the Terre Haute Electric Ry. to West Terre Haute, about one mile. The new line will involve the repairing of the old wooden bridge over the Wabash River or the rebuilding of a new steel bridge, and a division of the cost will have to be agreed upon between the county and company before the work is started. Stone & Webster, Engrs., Post Office Square, Boston, Mass.

DETROIT, MICH.—Wm. H. Ashwell, Ch. Engr., 25 Whitney Opera House Block, writes us that the contracts for building eight miles of extension of the Detroit, Plymouth & Northville Ry. will be let in the spring. Surveys are finished. John A. Russell, Pres., 608 Union Trust Bldg.——The Detroit & Chicago R. R. has been organized to build an electric road from Battle Creek to Detroit. The capital stock is fixed at $4,000,000. Work on the road is now well under way. It will absorb the street railway system at Jackson, owned by W. A. Boland, President of the new organization. P. H. Flynn, Vice-Pres.; W. A. Foote, Secy.

EWING, ILL.—An electric railway is projected from this place to Whittington, about three miles. The capital has been subscribed and construction will be started in the spring. The citizens of this town and some Chicago men are in back of the enterprise.

DALLAS, TEX.—The Twin City Union Ry. has been incorporated with $1,000,000 capital stock to build an interurban electric railway between Dallas and Fort Worth. Several miles of the right of way has already been graded. G. Van Ginkel, Dallas; E. M. Earle, Des Moines, Ia., and J. T. Goss, Fort Worth, are interested.

AUBURN, CAL.—A. S. Moore, Pres. Auburn Electric Ry., writes that a third of the materials to be used in the construction of the company's line are already secured and the remaining portions contracted for. The contract for construction will soon be let. The line will be about two miles in length.

CHATHAM, ONT.—Reports state that an electric road is to be built from Windsor to Chatham. The proposed road will run from Maidstone Cross through Essex county along the Middle road through Tilbury, Raleigh and Charing Cross to Chatham. Joseph Webb, of Ypsilanti, Mich., is interested in the enterprise.

## ELECTRIC LIGHT AND POWER.

MANCHESTER, N. H.—E. S. Whitney writes us that he and Albert Merrill will soon start surveys for a dam and power house, to develop about 2,500 HP. to be furnished to an electric road from Saco to Steep Falls, about 20 miles.

WATERBURY, CONN.—Reports state that this city will ask the legislature to authorize an issue of bonds for erecting a municipal plant.

MELROSE, MASS.—The Mayor writes us that the committee has as yet taken no definite action regarding the proposed municipal plant. It is therefore unlikely that one will be built this year.

PROVIDENCE, R. I.—It is stated that plans have been completed for a 1-story brick distributing station, 55 x 25 ft., at Apponaug for the Narragansett Electric Lighting Co. H. E. Wellman, Pres.; M. J. Perry, Gen. Mgr.

ALBANY, N. Y.—Bids are asked until Feb. 4 for lighting this city for five years from June 21. Isidore Wachsman, Clk. Bd. Contract and Supply.

ROCHESTER, N. Y.—Press reports state that the Rochester Gas & Electric Co. has purchased water rights along the Genesee River, here and at York, Geneseo and Mount Morris. Theodore W. Myers and John A. Sullivan, New York, and Geo. W. Rafter, C. E., and J. C. Tone, of Rochester, are said to be interested.

UTICA, N. Y.—Reports state that plans have been prepared for a new plant for the Equitable Gas & Electric Co. Anthony N. Brady, Pres.; E. A. Pinkney, Gen. Mgr.

WILMINGTON, N. Y.—It is stated that Paul Smith and Wallace Murray have purchased water rights and will erect a plant here, to furnish light to Lake Placid, to cost about $100,000.

ALLEGHENY, PA.—The Pennsylvania Light, Heat and Power Co. has increased its capital stock from $100,000 to $300,000. A large new plant is to be erected at the foot of Ontario St. and the Ohio River, Wood's Run, according to reports. Charles Geyer, Pres.

WEST CHESTER, PA.—Bids are asked until about March 1 for a new boiler plant to replace the old one in the plant of the Edison Electric Illuminating Co. No alterations will be made in any other part of the plant at present. James E. Pyle, Supt.

YORK, PA.—Bids are asked until Feb. 12, according to reports, for lighting the city for one year from April 1. Frank Dehuff, Secy. Light Com.

NEW CASTLE, DEL.—Press reports state that the question of erecting a municipal plant here is being considered.

EMPORIA, VA.—It is stated that Arthur Satterwhite will erect a plant here, at once.

ROCKINGHAM, N. C.—The council will ask the legislature for permission to issue bonds for erecting a municipal plant and water-works.

GAFFNEY, S. C.—On Jan. 15 this city is reported to have sold $11,000 in bonds for erecting a plant and $4,000 for water-works.

HOGANSVILLE, GA.—The council is said to be considering the question of lighting the city with electricity.

MONTICELLO, GA.—Press reports state that a plant to cost about $5,000, will soon be erected here.

SANDERSVILLE, GA.—G. A. Lyons, of Opelika, Ala., is said to have been granted a franchise for a plant and has also been awarded the lighting contract.

TUSCUMBIA, ALA.—O. G. Simpson, Mayor, writes us that C. M. Barry, of Atlanta, Ga., has been granted a franchise for a plant.

MINDEN, LA.—Reports state that Felix Drake, Thomas Crichton and R. H. Miller have been granted a franchise for a plant.

CHATTANOOGA, TENN.—The county commissioners are said to have decided to erect a plant to light the courthouse, bridges, and public buildings.

JACKSON, TENN.—Bids are asked until about March 1 for one 125-HP. boiler and engine, one 200-HP. condenser, 65-c. p. arc lights, poles, 12 miles of wire, etc., for the proposed municipal plant, which is to cost about $12,000 and have a capacity of 125 arc lights. Sam C. Lancaster, Cy. Engr.

NEWBERN, TENN.—The plant of the Newbern Water, Light & Power Co. was recently destroyed by fire, according to reports, loss about $10,000. The plant was recently purchased by the city and a bill is now before the legislature authorizing an issue of bonds for extensions and improvements.

TULLAHOMA, TENN.—George W. Davidson, Mayor, writes us that this city has let the contract for furnishing ten arc lights.

MT. STERLING, KY.—It is stated that the Mt. Sterling Water, Light & Ice Co. will soon commence extensive improvements to its plant.

CANFIELD, O.—C. C. Fowler writes us that a franchise for a plant has been granted to himself and four associates. No steps have yet been taken toward erecting the plant.

COLUMBUS, O.—L. B. Kaufman, Dir. Improvements, writes us that this city has authorized an issue of $232,000 in bonds for erecting a municipal plant. The question of proceeding is now before the council, which will have to appoint a special committee to supervise the work before construction is started.

GREENFIELD, O.—On Feb. 6 this city will sell $10,000 in bonds for erecting a plant and water-works. W. M. Porter, Village Clk.

LORAIN, O.—At the special election recently the people of this city voted against the proposed issue of $15,000 in bonds for erecting a plant.

WADSWORTH, O.—W. E. Herwick, of Akron, and Garth A. Dodge, of Tallmadge, are said to have applied to the council for a franchise for a plant.

KENDALLVILLE, IND.—It is stated that the council is taking steps looking toward the installation of an incandescent light plant.

TERRE HAUTE, IND.—The council has applied to the legislature to amend the charter of the city so as to enable it to construct a municipal plant and water-works.

GRAND RAPIDS, MICH.—Daniel McCoy, Pres., writes us that the Edison Light Co. has decided not to install a storage battery plant this year.

MACKINAC, MICH.—The council will, it is said, soon grant 30-year franchises for a plant, water-works and a sewerage system, as noted under Water-Works.

MENOMINEE FALLS, WIS.—Press reports state that the Wisconsin Sugar Co. will install an electric plant.

OSHKOSH, WIS.—Local papers state that Alderman E. W. Weisbrod will make an effort to have the council erect a plant.

RIPON, WIS.—Bids are asked until March 5 for a franchise for a plant for from five to fifteen years. F. W. Allen, Cy. Clk.

GARY, MINN.—It is stated that the people of this town are considering the question of erecting a plant.

THIEF RIVER FALLS, MINN.—The council is said to have decided to call a special election to vote on the question of issuing $7,500 in bonds for erecting a plant.

ORD, NEB.—The council has granted a ten-year franchise to the Fairbanks, Morse Co., of Omaha, for a plant. Work will be started at once.

ST. LOUIS, MO.—Edward Flad, Water Comr., writes us that the City Engineer will prepare plans for the proposed municipal plant at the Baden Station of the St. Louis water-works, to cost about $40,000. The plant will furnish light and also run an electric road from Baden Station to Chain of Rocks, about 4½ miles.

THAYER, MO.—W. S. Morse is said to want estimates on the equipment, etc., for an electric and an ice plant.

KANSAS CITY, MO.—Fire recently destroyed the power house of the Metropolitan Street Ry. Co., loss about $75,000. W. H. Holmes, Pres.; W. A. Satterlee, Gen. Supt.

SPRINGFIELD, MO.—The council has granted a 20-year franchise to Joseph D. Wallace, of Champaign, Ill., to erect a plant, and has also awarded him a contract for furnishing 175 arc lights, at $65 per light per year, moonlight schedule. Through an error the item was inserted in our last issue under Champaign, Ill.

LEXINGTON, TEX.—Local papers state that the people of this city are considering the question of erecting a plant and water-works.

LINDSAY, ONT.—F. Knowlson, Town Clk., writes us that the council will probably not build a municipal plant, but will let the lighting contract to the Light, Heat & Power Co. of Lindsay.

ANNAPOLIS, N. S.—The people of this town are said to have voted to purchase the plant of the local company.

DARTMOUTH, N. S.—It is stated that the council will apply to the legislature for permission to issue $40,000 in bonds for erecting a municipal plant.

## BRIDGES.

PORTSMOUTH, N. H.—Bids are asked until Feb. 16 for building a railroad trestle bridge about 292 ft. long at the navy yard, Portsmouth. For plans, specifications, etc., address the Commandant, Navy Yard. Mordecai T. Endicott, Ch. of Bureau of Yards and Docks, Navy Dept., Washington, D. C.

NEW BEDFORD, MASS.—The following bids were received by Wm. F. Williams, Ch. Engr., on Jan. 23, for constructing the New Bedford and Fairhaven bridge, advertised in Engineering News: For the metal work, requiring about 2,900,000 lbs. of medium steel, 68,000 lbs. of steel castings, 45,000 lbs. of iron castings and 2,738 lin. ft. of railing: American Bridge Co., $94,540; North Penn Iron Co., $103,000; Eastern Bridge & Structural Co., $105,000; Variety Iron Works Co., $107,500; Boston Bridge Works Co., $109,480; King Bridge Co., $112,400; New England Structural Co., $112,747; Pennsylvania Steel Co., $119,746; Canton Bridge Co., $121,000; Toledo Bridge Co., $125,000; J. E. Buddington, $133,000. For the foundation, masonry and roadway construction: Miller & Ellis, $152,865; Norcross Bros., $162,400; J. W. Bishop Co., $179,515; Frank Pidgeon, $199,549.

QUINCY, MASS.—A committee has been appointed to investigate the advisability of rebuilding the Quincy Point bridge and of making the new structure 50 ft. wide, with a draw 100 ft. in length.

SPRINGFIELD, MASS.—The Hampden county commissioners have appointed Collins & Norton, Engrs. and Contractors, of Springfield, Engineers for the new Mittineague bridge. The bridge will span the Agawan River at Mittineague. It will be of iron, with a 20-ft. roadway and two 5-ft. sidewalks.

ALTOONA, PA.—Harvey Linton, Cy. Engr., writes us that plans are being considered for a subway and bridge at 11th St., to be about 40 ft. in width, which is to be used as a highway. The subway will probably be adopted if any improvement is ordered.

PITTSBURG, PA.—Local papers state that the contract for building the superstructure of the new double-deck steel bridge across the Allegheny River for the Pennsylvania Lines west of Pittsburg was let on Jan. 22 to the American Bridge Co. The work will require about 7,000 tons of steel, and will cost about $500,000. It will be finished by Jan. 1, 1902. The contract for the substructure was recently let to the Drake & Stratton Co.

SHAMOKIN, PA.—Viewers have been appointed by the county court to investigate the feasibility of building a bridge over the Susquehanna River at Herdon. N. A. Sterling, Ed. Brennan and G. S. Fisher compose the committee appointed.

SLATINGTON, PA.—Bids are reported wanted by Chester B. Fulmer, 408 Drake Bldg., Easton, for constructing an overhead bridge or tramway across the Lehigh Valley R. R. tracks, connecting the slate quarry with the dumping ground.

ROWLESBURG, W. VA.—J. C. Horton, Rowlesburg, writes us that the contract for building an iron bridge in this town will be let some time in March. The structure will be 240 ft. in length, having two spans, and 18 ft. wide; stone foundation. The cost will be about $17,000. Address Clerk County Court, Kingwood, for further information.

CLEVELAND, O.—The following bids were received by James Ritchie, Cy. Engr., on Jan. 22, for building the Middle Seneca St. bridge: Substructure, F. E. Gribben, Cleveland, $49,695; Beirs & Doolittle, Cleveland, $62,728; Standard Contracting Co., Cleveland, $58,530; superstructure, G. Wm. Doersbach, Sandusky, $60,823; Andrew Dall & Son, Cleveland, $65,000; American Bridge Co., New York, $64,093; King Bridge Co., Cleveland, $63,381; Variety Iron Works, Cleveland, $70,538; Toledo Bridge Co., Toledo, $67,810; Massillon Bridge Co., Massillon, $71,550.

FINDLAY, O.—The contract for building a 30-ft. iron bridge across Portage Creek in Washington township has been let to Adams Bros., of this city. The bridge will be used by the Toledo, Fostoria & Findlay Electric Ry., and is to be built at once.

GALLIPOLIS, O.—The Addison bridge over the Campaign was destroyed by fire on Jan. 23. Loss, about $5,000.

INDIANAPOLIS, IND.—Bids are asked until Feb. 11 for constructing a bridge over White River and for the superstructure of a bridge over Big Eagle Creek on the Crawfordsville road, according to reports. Harry B. Smith, County Audr.

CHICAGO, ILL.—The contract for the substructure of the Clybourn Place bascule bridge over the Chicago River has been let to Fitz Simons & Connell, of Chicago, at about $64,000. This substructure was illustrated and described in our issue of Jan. 17.——The Massillon Bridge Co., Massillon, O., has been awarded the contract for the Ashland Ave. bridge over the Chicago River, at $91,200. The structure will be 260 ft. in length and 52 ft. wide. (For other bidders see issue of Jan. 24.)

APPLETON, WIS.—The following bids were received by Chas. H. Gillett, Cy. Engr., on Jan. 23, for the masonry center pier and south abutment of the South Division St. drawbridge; also for erecting the former Lake St. bridge on the same: Substructure, (1) Center pier, 10 × 24 ft.; (2) south abutment, 42 yds. masonry, per yd.; (3) superstructure, to erect iron work, furnish turn-table, flooring, etc.: American Bridge Co., Milwaukee, Wis., (3) $1,970; Wisconsin Bridge & Iron Co., Milwaukee, (3) $1,224; J. M. Raikes, Milwaukee, Wis., (3) $1,250; Milwaukee Bridge & Iron Works, Milwaukee, (3) $1,185 (accepted); August Greinke, Appleton, Wis., (1) $1,035, (2) $3.55 (accepted); T. H. Kelley, Appleton, (1) $1,225, (2) $5; Wm. Rohloff, Appleton, (1) $1,890, (2) $4.45; Ben Koepke, Appleton, (1) $1,250, (2) $5.15; Hackworthey Construction Co., Appleton, (1) $1,130, (2) $3.80, (3) $1,200; Anton Stadler, Appleton, (1) $1,575, (2) $5.48, (3) $848; John Martin & Co., Oshkosh, Wis., (1) $1,310, (2) $4; (3) $937.

CEDAR FALLS, IA.—Bids are asked until Feb. 8 for constructing a steel girder highway bridge and masonry foundations across the Cedar River, and also for the removal and reconstruction of the present bridge to a point over the Cedar River between Union and Washington townships, as stated in our advertising columns. Thomas Wilstend, Chn. Bd. Supervisors; D. W. Foote, County Audr., both of Waterloo.

BOONE, IA.—Reports state that a two-span iron bridge is to be erected over the Skunk River, north of this place.

BLAIR, NEB.—Bids are asked until Feb. 12 for building and repairing pile bridges in Washington county; also for building steel bridges. Watt Gauldrie, County Clk.

FARGO, N. DAK.—The county commissioners have awarded the contract for building a steel bridge over the Maple River, Durbin township, to J. J. Jardine, at $2,500.

GREAT FALLS, MONT.—The contract for the masonry work for the new railway bridge at this place for the Great Northern Ry., has been let to Grant, Smith & Co., of Chicago.

MILES CITY, MONT.—Bids are reported wanted by the county clerk until March 4 for building a steel wagon bridge across the Tongue River.

RED LODGE, MONT.—The contract for building a bridge across the Rock Creek at Joliet has been awarded to Wm. S. Hewitt at $4,500.

NEOSHO, MO.—Bids are wanted until Feb. 1 for constructing an iron bridge 130 ft. in length over Shoal Creek to have one or two spans, according to reports. R. Fred. Jones, County Surv.

COLVILLE, WASH.—Bids are asked until Feb. 1 for constructing a bridge across the county road where it crosses the slough on the reservation opposite the town of Marcus, according to reports. D. C. Ely, County Audr.

GOLDENDALE, WASH.—Bids are wanted by the county commissioners until April 2 for building a bridge across Swale Creek, according to reports.

MONTESANO, WASH.—The contract for constructing a bridge across the Chehalis River at Hatch's Ferry, near Oakville, has been awarded to Savage & Scofield, of Olympia, at $6,980.

ASTORIA, ORE.—Bids are asked until Feb. 4 for rebuilding the Walluski drawbridge, according to reports. H. J. Wherity, County Clk.

RIVERSIDE, CAL.—The city engineer is preparing plans for the proposed bridge over the railway tracks near Pachappa

RIVERSIDE, CAL.—Bids are asked until Feb. 6 for constructing a bridge across Temecula Creek at a point about 1½ miles south of Temecula. W. W. Phelps, County Clk.

STOCKTON, CAL.—Bids are asked until Feb. 5 for the repair and extension of a modern trestle across "Riddle's Cut," township three. Otto Grunsky, Clk. Bd. Supervisors.

HOLBROOK, ARIZ.—The county supervisors have appropriated $1,000 from the county road fund for the purpose of building a bridge across the Little Colorado River north of Winslow.

WINNIPEG, MAN.—Bids are reported wanted by D. B. Hanna, Gen. Supt. Canadian Northern R. R., Winnipeg, until March 1, for a steel bridge over the Red River, to be 750 ft. in length and to cost about $170,000.——It is stated that the Canadian Pacific R. R. also contemplates building a new bridge over the Red River. W. F. Tye, Engr. of Construction, Winnipeg.

WINNIPEG, MAN.—Bids are asked until Feb. 2 for building the abutments and piers for a bridge across the Rainy River, between the state of Minnesota and the Province of Ontario. Mackenzie, Mann & Co., Room 222, McIntyre Block, Winnipeg.

## BUILDINGS.

LENOX, MASS.—Reports state that R. W. Patterson, of New York, will erect a large stone residence on the Housatonic River. Robert H. Robertson, 160 Fifth Ave., New York, is said to be preparing plans.

NEW HAVEN, CONN.—The board of education has accepted the plans of Brown & Van Buren, Church and Chapel Sts., for the proposed new high school building, to cost about $229,500.

ALBANY, N. Y.—The following bids have been received by the board of contract and supply, for erecting school house No. 12, (1) being for building with assembly hall and (2) without: M. L. Ryder Bldg. Co., (1) $61,451; (2) $54,533; E. W. Martin & Son, Troy, $52,075, (2) $47,300; A. Pasquini, (1) $54,700, (2) $47,000; Denniston, Dyer & Co., (1) $53,990; Morris Mead, (1) $51,561, (2) $46,200.

BROOKLYN, N. Y.—Plans have been filed by T. J. Lamote, 409 East 19th St., for two 3-story brick flats, 20 × 75 ft., at Ocean Ave., near Ave. C, to cost about $20,000; by J. J. Rever, 68 Raymond St., for 11 3-story brick dwellings, 20 × 45 ft., at Chauncey St., near Lewis St., to cost about $49,500. C. Infanger, Arch., 90 Glen St.

FORT SLOCUM, N. Y.—Bids are asked until Feb. 11 for erecting a pavilion hospital here. C. R. Tyler, Q. M.

NEW YORK, N. Y.—Plans have been filed by Stewart & Smith, 409 Western Boulevard, for three 4-story brick dwellings, at Riverside Drive, near 106th St., to cost about $110,000, Hoppin & Klein, Archs., 160 Fifth Ave.; by J. M. Lynch, 635 East 135th St., for two 5-story brick flats, at Willis Ave. and 143d St., to cost about $60,000, H. T. Howell, Arch., Brook Ave. and 138th St.; by Harriet S. Thome, 606 Madison Ave., for a 5 and 6-story stone dwelling, at Fifth Ave. and 84th St., to cost about $75,000, C. P. Gilbert, Arch., 1123 Broadway; by H. J. Lefler, 135 Broadway, for a 7-story brick hotel building, at 112 West 47th St., to cost about $60,000, George Keister, Arch., 1133 Broadway; by E. Wassermann, 61 West 46th St., for altering 33 West 56th St. to a 5-story stone dwelling, to cost about $45,000, C. P. H. Gilbert, Arch.; by A. Silverson, 326 East 50th St., for a 6-story brick flat, 37 × 87 ft., at 326 East 50th St., to cost about $40,000, M. Bernstein, Arch., 245 Broadway.

TOMPKINSVILLE, N. Y.—Bids are asked until Feb. 6 for erecting an extension to the office building at the light house depot, as stated in our advertising columns. Plans and specifications are on file at the office of Engineering News, 220 Broadway, New York. Lieut.-Col. D. P. Heap, U. S. Engr.

WEST ALBANY, N. Y.—Press reports state that the N. Y. C. & H. R. R. R. will erect new roundhouses, etc., here, to cost about $150,000. W. J. Wilgus, Ch. Engr., Grand Central Station, New York.

WESTFIELD, N. J.—The contract for erecting the new public school building here is said to have been let to Carpenter & Williams, of Norwich, Conn., at $31,950.

NORRISTOWN, PA.—The county commissioners have accepted the plans of Shermerhorn & Reinhold, 430 Walnut St., Philadelphia, for the proposed new courthouse, to cost about $150,000.

PHILADELPHIA, PA.—Bids are asked by the commissioners for the erection of public buildings, until Feb. 8, for furnishing bricks, fire-bricks, plumbing supplies, etc. Samuel C. Perkins, Pres.; Wm. B. Laud, Secy.

PHILADELPHIA, PA.—Stacy, Reeves & Sons, 1611 Filbert St., have been awarded the contract for a 7-story brick warehouse, 121 × 143 ft., at 812 to 822 Race St., for Strawbridge & Clothier, to cost about $140,000. Gilbert & Reid, Archs., 1420 Chestnut St.——Arthur H. Williams & Sons, Fourth and Locust Sts., are said to have received the contract for erecting a 5-story brick apartment house, 38 × 50 ft., at 103 and 105 South 11th St., for Samuel Austin, to cost about $50,000. Edward Hazelhurst, Arch., Girard Bldg.

PITTSBURG, PA.—C. M. Bartberger, 200 North St., is said to be preparing plans for the proposed new 2-story brick school house, 185 × 90 ft., on Margaretta St., to cost about $125,000.——The trustees of the Western Pennsylvania Institution for the Instruction of the Deaf and Dumb are said to have let the contract to George A. Cochrane, 246 Washington Ave., Allegheny, for erecting the proposed new building at Edgewood, to replace the one recently burned. Alden & Harlow, Archs., 314 Fourth Ave.——Thomas D. Evans, 814 Lewis Bldg., has prepared plans for a 9-story brick apartment house, 138 × 155 ft., at Washington and Franklin Sts., for Paul Zimmerman, George W. Blair and others, to cost about $120,000.

WILMINGTON, DEL.—George I. Lovatt, 424 Walnut St., Philadelphia, Pa., is said to have prepared plans for a new building here for the Convent of the Visitation, to cost about $100,000.

NORFOLK, VA.—Bids are asked until Feb. 16 for constructing a 2-story brick office building at the navy yard. M. T. Endicott, Ch. Bureau Yards and Docks, Navy Department, Washington, D. C.

CHARLOTTE, N. C.—It is stated that the Piedmont Realty Co. will erect a large office building on South Tyson St., to cost about $60,000. B. D. Heath, Pres.

AUGUSTA, GA.—A committee of the board of directors of the Georgia Railroad Bank is said to be securing plans for a new building, to cost about $60,000. Jacob Phinizy, Chn.

MILLEDGEVILLE, GA.—Architects are invited to submit plans for a building capable of accommodating about 1,000 persons on the grounds of the State Sanitarium. T. H. De Saussure, Engr.

MOUNT VERNON, GA.—Bids are asked by the county commissioners until Feb. 12 for erecting a new jail building. Judge John McRae, Chn. Com.

BIRMINGHAM, ALA.—M. T. Lemman & Co. will erect a 6-story brick hotel building at Fourth Ave. and 19th St., to cost about $250,000.

CROWLEY, LA.—Bids are asked by the Mayor until Feb. 5 for erecting a new high school building, to cost about $20,000.

MEMPHIS, TENN.—Bids are asked by Napoleon Hill, care of the Union & Planters' Bank, until Feb. 14 for erecting a 5-story business building at Main and Gayoso Sts. G. M. Shaw, Arch., 41 Madison St.

LEXINGTON, KY.—Bids are asked until Feb. 9 for erecting the new 3-story brick gymnasium building, 125 × 100 ft., for the State College of Kentucky, to cost about $26,000. F. Paul Anderson, Supt. Construction; D. F. Frazee, Chn. Bldg. Com.

LOUISVILLE, KY.—The joint building committee of the school board has let the contract for preparing plans for the new school house at 30th and Duncan Sts., to cost about $30,000, to D. X. Murphy, 250 Fifth St., and for the plans for the school house at Seventh and Hill Sts., to cost about $20,000, to H. P. McDonald, 44 Mutual Life of Kentucky Bldg.

CLEVELAND, O.—Bids are asked until Feb. 25 for erecting a new school house on Bolton Ave., near Cedar Ave. Thos. H. Bell, School Director.

INDIANAPOLIS, IND.—The treasury department has accepted the plans of Rankin & Kellogg, 1024 Walnut St., Philadelphia, Pa., for the proposed new U. S. building here, to cost about $1,100,000.

CHICAGO, ILL.—Plans have been filed by W. H. Ellis for seven 2-story brick residences, 24 × 30 ft., at 1206 to 1220 Ainslie St., to cost about $28,000, W. G. Krieg, Arch., 163 Randolph St., Paul Mueller, Builder, 169 Randolph St.; by W. H. C. Sykes, for two 3-story brick apartment houses, 45 × 71 ft., at 949 to 955 West Monroe St., to cost about $35,000, W. Alloway, Arch., Marquette Bldg., C. D. Armstrong, Builder, 6735 Lafayette St.; by the Chicago Terminal Transfer R. R. Co., for a 4-story brick freight house, 90 × 216 ft., at 212 to 218 Harrison St., to cost about $70,000, C. A. Reid, Arch.

DANVILLE, ILL.—Bids are asked until Feb. 14 for erecting a church building complete at the Danville Branch N. H. D. V. S. J. M. Benningham, Gen. Treas.; M. T. McMahon, Pres. Bd. Mgrs.

BARRON, WIS.—We are informed that the following contracts have been let for constructing the new courthouse here: O. H. Oleson, Stillwater, Minn., construction, $32,275; Stack Bros., West Superior, Wis., heating, $1,620; Fox Bros., Eau Claire, Wis., plumbing, $680.

ADEL, IA.—Bids are asked by the county commissioners until Feb. 20 for erecting the proposed new courthouse here. Proudfoot & Bird, Archs., Des Moines.

WATERLOO, IA.—Bids are asked until about Feb. 26 for erecting the proposed new 3-story brick and stone courthouse and jail building here, to cost about $125,000. The contract for cell work has been let. Fremont D. Orff, Arch., Lumber Exchange Bldg., Minneapolis, Minn.; H. B. Cropper, County Treas.

DULUTH, MINN.—Bids are asked by the board of public library trustees until Feb. 16, according to reports, for erecting the proposed new Carnegie library building, to cost about $70,000.

RENVILLE, MINN.—Bids are asked until Feb. 15 for erecting a new school house. F. C. Greene, Secy. School Board.

EMPORIA, KAN.—Bids are asked until Feb. 20 by John C. Miller, Pres. College of Emporia, for erecting the new memorial library building. John C. Miller, Secy. Executive Com.

TOPEKA, KAN.—We are informed that Holland & Squires, 727 Kansas St., have prepared plans for a 5-story brick warehouse, 100 × 150 ft., for Joab Malvane, to cost about $40,000.

BREMERTON, WASH.—Bids are asked until March 9 for erecting two 1-story brick and steel magazine buildings, 150 × 50 ft., at the Puget Sound Naval Station. M. T. Endicott, Ch. Bureau Yards and Docks, Navy Dept., Washington, D. C.

DENVER, COLO.—Frank S. Snell, 1624 Curtis St., informs us that the proposed 4-story brick apartment house at 17th Ave. and Lafayette St., for the Perrenoud Estate, will have steam heat, electric lights, elevators, etc., and cost about $75,000. He will be glad to receive catalogues, etc., of the various equipments, etc.

POMEROY, WASH.—Bids are asked by the county commissioners until March 4 for erecting a brick and stone courthouse.

BAKER CITY, ORE.—W. A. Samms has prepared plans for a fireproof hospital building and wishes to receive prices, catalogues, etc., of materials for its construction and equipment.

SAN FRANCISCO, CAL.—It is stated that H. H. Bancroft has let the following contracts for erecting his new 6-story brick apartment house at Van Ness Ave., near Sutter St.: Carpenter work, to J. F. Logan, 621 Mission St., at $42,475; mason work, to John McCarthy, at $46,615.

MONTREAL, QUE.—Fire recently destroyed a number of buildings in the business portion of the city, including the board of trade building, which cost about $700,000. Total loss, about $2,500,000.

## WATER-WORKS.

WELLS, ME.—The question of building new works to cost about $40,000 is being considered.

KEENE, N. H.—The question of securing a new water supply from Woodward Pond, in Roxbury, is being considered.

MIDDLEBURY, VT.—It is reported that the water committee proposes to secure a water supply from a brook in the Little Notch.

BROCKTON, MASS.—Alderman King has introduced an ordinance authorizing an appropriation of $10,000 for making surveys, investigations, etc., for an increased water supply.

MYSTIC, CONN.—The Mystic Valley Water Co. has voted to make investigations for an increased water supply. D. B. Spalding, Pres.; Wm. Wheeler, Treas. and Supervising Engr., Boston, Mass.

NORTHAMPTON, MASS.—E. E. Davis has submitted a report on the available streams for an increased water supply.

CHESHIRE, CONN.—The Cheshire Water Co. has been incorporated with a capital of $50,000 by Jacob P. Walter, of Cheshire; John T. Manson, or Orange, Conn., and Chas. N. Nichols, of New Haven.

WATERBURY, CONN.—Bids are asked until Feb. 5 for completing the earth dam at Wigwam Reservoir; Check, $1,000. Bids for constructing the masonry dam will soon be asked, as stated in our advertising columns. R. A. Cairns, Cy. Engr.

BUFFALO, N. Y.—F. J. Illig, Supt. Bureau of Water Supply, has recommended the installation of a water meter system throughout the city.——It has been decided that for the present the city will not require a new pumping engine. Unless meters are put in to prevent the waste of water it will be necessary in the near future to install a 36 or 48-in. water main to cost about $800,000. A. F. Scheu, Chn. Bd. Pub. Works.

GOSHEN, N. Y.—Governor Odell has vetoed the bill authorizing this place to issue $10,000 in bonds for improving its water supply.

KEENE VALLEY, N. Y.—The Keene Valley Water Co. has been incorporated with a capital of $10,000 by B. B. Estes and G. H. Luck.

LEROY, N. Y.—A citizens' committee, including W. F. Hyck, Chn.; P. Gleason, M. Muller and A. F. Woodward, has been appointed to act jointly with the water commissions in regard to securing a water supply for this city. A. S. Tregea, Clk.

WATERVLIET, N. Y.—A new committee will soon be appointed to investigate the question of a pure water supply.

WATKINS, N. Y.—This place has a bill before the legislature asking for authority to borrow $20,000 for extending the works and sewers.

ISLAND HEIGHTS, N. J.—Contracts for the materials, etc., for the proposed works have been let, according to reports.

JERSEY CITY, N. J.—The T. A. Gillespie Co., Pittsburg, Pa., and New York, is reported to have been awarded the contract by Patrick H. Flynn, the contractor, for the new works for Jersey City, for furnishing and constructing four miles of brick and stone conduit to form part of the pipe line between Boonton and Jersey City. The Gillespie Co., some time ago received a contract for the 17 miles of steel pipe. Garwood Ferris, Engr.-in-Charge, reports as follows as to the condition of the work up to Jan. 1: On Conduit No. 1 (leading from the dam to the first steel pipe line), which is to be about 4,600 ft. long, 2,631 ft. in open cut had been brought to grade, and 1,273 ft. in tunnel excavated. All excavation required on this portion of the work will probably be completed this month. At the dam the work remains in the condition reported Dec. 1. The headings in Hook Mountain tunnel met Dec. 1 (1,094 ft. of tunnel in all), and in addition, on the westerly approach, largely in rock, about 1,714 ft. had been brought to grade. Out of the 91,476 ft. of 6-ft. steel pipe required, 21,550 ft. had been laid. In the Watching Tunnel, which when completed will be 7,212 ft. long, 608 ft. had been excavated. In addition 768 ft. of approach at east and west ends had been brought to grade. Work had been started at Kingsland, preparatory to excavation of material for forming the embankment across the Hackensack Meadows on which the steel pipe is to be laid.

MILLBURN, N. J.—The Elizabethtown Water Co. has prepared plans for a new engine house for the new works at Millburn.

EAGLES MERE, PA.—Benj. A. Welsh, Supt. Eagles Mere R. R. Co., Sonestown, Pa., writes us that the Eagles Mere Water Co. has been incorporated with a capital of $20,000 to supply the borough of Eagles Mere with water from drilled wells. Power will be supplied by the Eagles Mere Light Co. There will be required about 1½ miles of pipe and appliances. Wm. Emery, Pres., Williamsport, Pa.; E. S. Chase, Secy. and Treas., Eagles Mere. Works must be in operation by June 1. The borough of Eagles Mere will construct about a mile of sewer this spring. Address E. V. Ingham, Chief Burgess, Eagles Mere, Pa.

HARRISBURG, PA.—The Citizens' Water Co. of Susquehanna Township and the Citizens' Water Co. of Middle Paxton Township, Dauphin county, have applied for charters, local parties and H. L. Lark, of Millersburg, Pa., being interested.

PHILADELPHIA, PA.—Bids are asked until Feb. 11 for furnishing the materials and for the improvement and filtration of the water supply, as stated in our advertising columns. Wm. C. Haddock, Dir. Dept. Pub. Works. Local papers state that the plans and specifications for the improvements in West Philadelphia will be ready about Feb. 20, and those for Torresdale by June 1. The bids submitted in December for filter beds at the Lower Roxborough Reservoir, having been considered excessive by Director Haddock and the other officials having charge of the improvement and filtration of the water supply, the specifications for the plant have been modified and additional bids for the work will be opened on Feb. 11. The principal change made in the specifications is the substitution of brick for stone for the five regulating houses, and instead of being double the plans as modified direct that each house shall be separate. This new arrangement, it is expected, will greatly reduce the cost of construction, and will prove a saving to the city. Each of these filters, five in number, will have a capacity of 1,500,000 gallons every 24 hours, but the total capacity will be 6,000,000 gallons a day, as it will be necessary to permit one filter bed to remain idle every day in order to have it cleaned. It is thought that these beds can be completed and ready for operation within eight months, so as to admit of filtered water being distributed in Germantown and Chestnut Hill before the close of the present year. The plans and specifications for the plant to be located at Upper Roxborough are now being prepared, and it is the desire of Director Haddock to have the work at Belmont, Torresdale and Queen Lane well advanced before the beginning of next year. The bids received Dec. 12 for the filter plant at Lower Roxborough were: R. A. Malone, Lancaster, $221,441; Ryan & Kelley, $241,688; Harmer & Quinn, $244,944; David Peoples, $268,192; Hoffman Engineering Co., $289,863; National Contracting Co., New York, $339,015. The Hoffman Egineering Co., lowest, at $315,816 (accepted), and Harmer & Quinn submitted the only bids Jan. 22 for constructing independent fire mains in Walnut, Market, Arch and Race Sts., to cost about $300,000. There will be required about 15,360 ft. of 8-in., 22,224 ft. of 12-in. and 5,755 ft. of 16-in. pipe and 166 fire hydrants and three fire boat connections.

PITTSBURG, PA.—We are informed that the Edgemoor Iron Co., Wilmington, Del., has been awarded the contract at $985 for the superheating arrangement at the Herron Hill pumping station. That for the pneumatic hammer at the Brilliant pumping station has not yet been let.

SANDY LAKE, PA.—Austin Potter, of the Sandy Lake Water Co., writes us that it is proposed to buy about two miles of pipe in a few weeks, together with valves, boxes, etc., as may be required.

TAMAQUA, PA.—W. F. Leopold, Borough Secy., writes us that the question of new works will be voted upon at the election Feb. 19.

WOODSTOCK, VA.—Bids are asked until Feb. 15 for furnishing the materials and for constructing works to cost $20,000, as described in our advertising columns. The contract awarded to G. R. Miner, as reported in our issue of Jan. 10, has been rescinded, according to reports. Chas. S. York, Engr., 1526 West Biddle Ct., Baltimore, Md.

ATLANTA, GA.—An election will be held March 20 to vote on the question of issuing $200,000 in bonds for improving the works.

NEW ORLEANS, LA.—The sewerage and water board are anxious to take steps to secure the early possession of the works of the N. O. Water-Works Co., and to let contracts for extensions, etc.

LAUREL, MISS.—Bids are asked until Feb. 26 for furnishing the materials and for constructing works, as described in our advertising columns. Iowa Engineering Co., Clinton, Ia.; F. W. Sullivan, Clk.

SOMERVILLE, TENN.—The state senate is reported to have passed a bill authorizing this place to issue bonds for works and an electric plant.

SPRINGFIELD, TENN.—Robt. L. Lund, of Nashville, Tenn., has been engaged to make preliminary plans and estimates for works. It is expected that the plant will be completed this year.

HENDERSON, KY.—S. H. Kimmel, Cy. Engr., writes us that plans for a filtration plant are being prepared by Edmund Weston, 86 Weybosset St., Providence, R. I. It will cost about $25,000 and have a capacity of 3,000,000 gallons a day. The contract will probably be let about May or June. W. E. McGraw, Pres. Water Comrs.; R. C. Blackwell, Secy. and Treas.; Wm. Siebert, Supt.

GREENFIELD, O.—Bids are asked until Feb. 6 for the purchase of $10,000 of 4% bonds for improving the works and electric plant. W. M. Porter, Village Clk.

MIAMISBURG, O.—The question of works, to be owned either by the town or by a private company, is being considered; estimated cost, about $45,000.

SPRINGFIELD, O.—The water-works trustees are in favor of spending $70,000 for new and larger water mains.

WELLSVILLE, O.—The water-works trustees have decided to have L. E. Chapin, of Canton, O., make surveys for a new water supply from the Yellow Creek water shed. Address Trustees Grafton and Maloney.

KOKOMO, IND.—Jackson Morrow, Cy. Engr., writes us that no steps have yet been taken in regard to the proposed new works. The contract with the company does not expire for 17 months. Meanwhile an effort is being made by the city to buy the works. Should these efforts fail the city will soon take steps to install its own works.

MACKINAC ISLAND, MICH.—We are informed that Detroit capitalists are contemplating the installation of a combined water-works and electric light plant, also extensive sewerage system. The pumping equipment will include two 1,000,000-gallon pumps; the electric, two 75 K-w. generators, engines and boilers of sufficient capacity. Specifications for power house and pumping and sewer equipment will be ready in about two weeks. Field & Hinchman, Engrs., Majestic Bldg., Detroit, Mich.

BLOOMINGTON, ILL.—Owing to a decrease in the supply, in consequence of the growth of the city, and in spite of its being supplemented by the air-lift system, a committee has been appointed to consider sources for a new or an enlarged supply. Elmer Folsom, Cy. Engr.

CHICAGO, ILL.—J. H. Spengler, Asst. Cy. Engr., writes us as follows regarding the proposed works improvement: The city council has been asked to appropriate money for the following improvements: Extension of the old two-mile tunnels, in one tunnel to the intake shaft of the Carter H. Harrison Crib, and the removal of the old two-mile crib, constructed in 1867; estimated cost, $200,000. Three new triple expansion engines and appurtenances to take the place of the old pumping engines at the Chicago Ave. pumping station; estimated cost, $380,000. A new stand pipe at the Washington Heights pumping station; estimated cost, $9,000. A new boiler plant at the 14th St. pumping station, with coal conveying machinery, etc.; estimated cost, $80,000. A new superstructure for the Lake View Intake Crib, to cost $70,000. John Ericson, Cy Engr.

CICERO, ILL.—The municipal ownership commission has recommended the purchase of the works and light plant owned by the Chicago Suburban Light & Water Co. If the company refuses to sell at a reasonable figure it is proposed that new plants be built. The Yaryan Co. has asked for a franchise. P. O., Chicago.

GARRISON, IA.—C. R. Lowe, Clk., writes us that the proposition to issue bonds for works was defeated at the recent election.

BELLE PLAINE, MINN.—Bids are asked until Feb. 11 for drilling an 8-in. well for works. J. E. Townsend, Borough Clk.

BUFFALO LAKE, MINN.—E. W. Rebstock, Village Recdr., writes us that the contract for works will be let in February. Up to Jan. 21 the engineer had not been engaged. The water will be secured from wells. Pop., 500.

HERMAN, MINN.—Bids are asked until Feb. 18 for furnishing the materials and for constructing a steel tower 100 ft. high, including foundations and a 2,000-bbl. pine water tank. O. C. Eaton, Village Recdr.

MINNEAPOLIS, MINN.—Bids are asked until Feb. 8 for furnishing 1,225 tons of 6 to 24-in. cast-iron water pipe, 50 tons of special castings, 45 single streamer hydrants, 57 gates, 6 to 24-ins. and 48 gate boxes for 6 and 8-in. gates. We are informed that G. W. Sublette, Cy. Engr., has been directed to locate the new pump house and construct coffer dams, walls and intake pipe by day labor. L. A. Lydiard, Cy. Clk.

CHERRYVALE, KAN.—The court has dismissed the case brought by the Cherryvale Water Co. to restrain the city from building works, bonds for which were voted last spring. It is stated the council will now proceed to build.

ALBION, NEB.—Reports state that $8,000 of bonds have been sold for extending the mains. T. F. Martin, Mayor.

CUSTER, S. DAK.—The question of building works, the water to be supplied either by springs or by a gravity pipe line 17 miles long, costing $100,000, is reported as being considered.

YANKTON, S. DAK.—F. L. Van Fassel, Secy. Business Men's Club, writes us that the question of a new water supply and works is being considered, but that nothing definite has been done. It is proposed to secure the new water supply from the Missouri River, the present being from artesian wells.

HANNIBAL, MO.—The mayor writes us that it has not yet been decided when to issue the bonds for works, etc.

EL PASO, TEX.—We are informed that the plant of the El Paso Pure Water Co. is for purifying the local water and rendering it fit for domestic use. The water is to be retailed from wagons.

HEARNE, TEX.—W. W. Bivin, Secy., writes us that no information regarding the proposed works can be furnished for about 20 days. Pop., 2,150.

WEATHERFORD, TEX.—W. M. Knight, City Secy., writes us that the Weatherford Water, Light & Ice Co., controlled by New York bondholders, now supplies the city with water, but that the city is investigating the question of city ownership. The question of sewers is also being considered. Pop., 7,000.

FLORENCE, COLO.—A. B. McFall, Cy. Engr., under date of Jan. 21, writes us that bids were wanted until Jan. 28 to construct a reservoir, adjoining the present one, requiring about 10,000 cu. yds. of excavation, and to have a capacity of 11,000,000 gallons. The city also proposes to build a pumping plant in connection with its present gravity system.

FORT COLLINS, COLO.—Wm. Rist, Cy. Engr., writes us that the engineer's report and estimates for the proposed works were accepted Jan. 21, but no action was taken.

ASOTIN, WASH.—The council is reported as considering the report of G. W. Bailey, of the Lewiston Water & Power Co., regarding the installation of works.

SPOKANE, WASH.—Reports state that the engineer is planning for the proposed reservoir, to cost about $300,000. Reservoir will consist of two basins, each of which will hold 20,000,000 gallons.

TACOMA, WASH.—Bids will soon be asked by Water Commissioner Clark for furnishing and laying new mains, and setting 35 5-in. hydrants, gate valves, special castings, fire hose, hose carriages, lead, etc.

PRESTON, CAL.—A bill is before the legislature authorizing an appropriation of $7,000 for improving the works at Preston School.

STANFORD UNIVERSITY, CAL.—Reports state that Chas. J. Warren, San Francisco, has the contract for a 1,000,000-gallon concrete reservoir, to cost about $10,000. Other improvements to the works are to be made costing about $50,000. J. C. McMillan, County Surv.

JICARILLA AGENCY, N. MEX.—A. C. Tonner, Asst. Indian Comr., Washington, D. C., writes us that the following bids were received Jan. 10 for constructing a water and sewer system at the Jicarilla Indian Agency: J. H. Owen, 240 Lumber Exchange, Minneapolis, $28,990 (accepted); Durango Plumbing Co., Durango, Colo., $29,847; Wm. O. Morrison, Raton, N. Mex., $32,010; Walter D. Lovell, Des Moines, Ia., $38,000. The award was made to J. H. Owen upon the basis that all obtainable Indian labor will be used in the accomplishment of the work.

MONTREAL, QUE.—Geo. Janin, Supt. Water Dept., it is stated, has just made a report in favor of spending about $1,641,000 in improving the works, to include the replacing of all the 4 and 6-in. mains with 18-in. pipe, at a cost of $800,000; an electric pump, $30,000; new service mains, $24,000; a new reservoir, to cost $64,000; new hydrants, to cost, $30,000, etc.

OTTAWA, ONT.—It is estimated that the proposed extension and additional pumping machinery for the works will cost about $100,000. Address City Engineer Ker and Alderman Hastey, Chn. Water Com.

## SEWERAGE.

BROCKTON, MASS.—This city is said to have asked the legislature for permission to issue $100,000 in bonds for extending the present system.

DEDHAM, MASS.—On Feb. 2 this city will sell $120,000 in bonds for constructing a system. E. A. Brooks, Town Treas.

FAIRHAVEN, MASS.—The council is, according to reports considering the question of constructing the southwest gravity sewer.

WOONSOCKET, R. I.—The sewer committee has asked the council for an appropriation of $60,000 for sewer construction for next year.

SYRACUSE, N. Y.—The council has decided to construct a sewer in Judson St.

BAYONNE, N. J.—The following bids have been received by the council for constructing a sewer in Ave. F: M. T. Connolly Contracting Co., $16,747 (accepted); Jas. J. Cogan, $16,899; Martin Murray, $21,791; James Forquer, $19,000; for constructing a sewer in Ave. D: M. T. Connolly Contracting Co., $7,594 (accepted); Philip Tumalty, $8,251; Wm. F. Doyle, $7,805; James J. Cogan, $8,498; James Forquer, $11,150; Martin Murray, $10,500.

NEWCASTLE, PA.—The sewer committee has approved the plans of City Engineer Robert McConahy for the extension of the system from Gardner Ave. bridge to a point below Raney's dam to cost about $58,089.

ATLANTA, GA.—An ordinance has been introduced into the council providing for the construction of sewers in Peters and Beeman Sts. W. J. Campbell, Cy. Clk.

NEWPORT, KY.—The City Engineer writes us that nothing has yet been done toward re-advertising for bids for constructing the proposed system and that no steps are likely to be taken for 30 days.

DELAWARE, O.—The council is said to have engaged John P. Force, 49 Deshler Bldg., Columbus, to prepare plans and specifications for a system and disposal plant.

SPRINGFIELD, O.—The city engineer estimates the cost of constructing the proposed sewer in Ward St., at about $1,300.

TOLEDO, O.—Bids are asked until Feb. 4 for constructing a sewer in the alley northeast of Locust St., and in the alley between Page and Moore Sts. John E. Connell, Cy. Clk.

TERRE HAUTE, IND.—The city engineer has been directed to prepare plans for a sewer in Eighth St., and one in 13th St.

FOND DU LAC, WIS.—George S. Pierson, of Kalamazoo, Mich., writes us that he is now preparing plans for a disposal plant and pumping station here. An intercepting main sewer with several branches will also be required.

SIOUX FALLS, S. DAK.—The Tenth Street Sewer Co., has filed articles of incorporation with a capital of $2,000. George T. Blackburn, Rollin T. Wells, and F. H. Hollister are directors.

DENVER, COLO.—The council is said to be considering the question of constructing a sewer in 16th St.

GUTHRIE, OKLA. TER.—This city will vote on the question of issuing $134,000 in bonds, for constructing a system, at the spring elections.

OKLAHOMA CITY, OKLA. TER.—Bids are asked by the city council until March 4, for about 15,000 ft. of pipe sewers.

BAKERSFIELD, CAL.—A. T. Lightner, Cy. Clk., writes us that the contracts for about 15,000 ft. of sewers in Districts Nos. 1 and 2 have been let to the City Street Improvement Co., and C. J. Lindgren or Lindgren & Hicks. M. A. Macmurdo, Engr.

CHICO, CAL.—V. T. McCray, has prepared plans for a system requiring about 12¼ miles of pipe sewers, sewer farm and a water system for flushing to cost about $43,657.

LOS ANGELES, CAL.—The sewer committee has been asked to construct sewers in Molino and Fourth Sts., and Gladys Ave.

MADERA, CAL.—F. Knoblock, of Fresno, has been making surveys for a system in this city for the Madera Sewer Co., to cost about $40,000.

PASADENA, CAL.—W. B. Clapp, Cy. Engr., writes us that bids will be received in about a month for constructing sewers in Vernon, Mary, Kensington and Millard Sts.

PERTH, ONT.—The question of issuing bonds for constructing a system has not yet been voted on.

## GARBAGE DISPOSAL—STREET CLEANING

ALBANY, N. Y.—Bids are asked until Feb. 4 for removing street dirt; check, $1,000; bond, $5,000. Isadore Wachsman, Clk. Bd. of Contract and Supply.

BUFFALO, N. Y.—Plans for the new crematory for the Baynes Garbage Crematory Co. have been submitted to the state board of health by Geo. McArthur, Mgr., Buffalo. If the plans are approved work will be begun at once, according to reports.

ATLANTIC CITY, N. J.—Bids are asked by the city clerk until Feb. 11 for furnishing the materials and for extending the city crematory, as noted in our last issue. Separate bids will be received for the gas-producer, furnaces, stack, etc. Amos W. Barnes, Eng. and Arch., 9th and Walnut Sts., Philadelphia.

MARCUS HOOK, PA.—Ward & McGinnis, Chester, Pa., have been awarded the contract for the crematory, barracks, etc., for Marcus Hook.

JACKSON, MICH.—W. J. Caldwell, Recdr., writes us that nothing has been done as yet regarding the proposed crematory.

DETROIT, MICH.—Corporation Counsel Tarsney is preparing a bill authorizing this city to build a crematory to cost about $100,000. As noted last week, the present 3-year contract with the Detroit Sanitary Works expires June 30, and it is desired that bids will be asked for by the controller at once for a 10-year contract for collecting and disposing of the garbage, or for building a plant for the city.

MILWAUKEE, WIS.—Local papers state that bids will be asked in a few days for furnishing the materials and for constructing a crematory of the Eagle system on Jones Island, to cost about $50,000. The plant will have three 50-ton furnaces, with room in the building for a fourth furnace. C. J. Poetsch, Cy. Engr.

ST. LOUIS, MO.—Bids are asked by the board of public improvements until Feb. 12 for sprinkling the streets during the coming season.

MONTREAL, QUE.—F. L. Decarie, of Montreal, has submitted a proposition to the incinerator committee offering to make a 10-year contract with the city and to take the present Thackeray crematory, and to burn the garbage, etc., at a cost to the city of 10% less than at present.

## STREETS AND ROADS.

BARNSTABLE, MASS.—This city will, it is said, spend $100,000 in street improvements this season.

NEW HAVEN, CONN.—The council has asked for permission to issue $500,000 in bonds for permanent street improvements.

NEW YORK, N. Y.—Bids are asked by the department of parks, Arsenal, Central Park, until Feb. 7 for regulating, grading, etc., in Thomas Jefferson Park, and for furnishing trap rock screenings in Central Park.

ROCHESTER, N. Y.—The council is considering the question of paving St. Paul St.

NEWARK, N. J.—The street and water commissioners have appropriated $100,000 for highway improvements for the coming year.

PASSAIC, N. J.—The street committee is said to have let the contract for macadamizing Monroe St. to the Union Building & Construction Co.

PLAINFIELD, N. J.—The street committee has decided to macadamize Liberty St. next spring.

HARRISBURG, PA.—The State Highway Commission, composed of H. B. Worrell, A. J. Cassatt and W. L. Elkins, of Philadelphia; H. N. Brackenridge, of Natrona; James A. Beaver, of Bellefonte, and H. C. Snarely, of Lebanon, has recommended an appropriation of $1,000,000 for state highways.

PHILADELPHIA, PA.—Bids are asked until Feb. 9 for laying a cement pavement in the courtyard of building No. 3 at the Schuylkill Arsenal. Col. John V. Furey, Deputy Q. M. Gen., U. S. A.

TITUSVILLE, PA.—Bids are asked by the City Clerk until Feb. 4 for constructing brick pavements, to cost about $18,000. Joseph Smith, Engr.

WASHINGTON, D. C.—The following appropriations have been asked: $5,000 for completing the sidewalks and curbs on Albermarle St.; $25,000 for opening, grading and macadamizing Connecticut Ave., extended east of Rock Creek, $100,000, for opening, grading, macadamizing, bridging and guttering 16th St., from its present terminus, and $16,500 for paving North Capitol St.

RICHMOND, VA.—The street committee is said to have been asked to pave Tredegar St., at a cost of about $15,600.

TAMPA, FLA.—The council is said to be considering the question of paving of Water St.

SHREVEPORT, LA.—A special election will be held March 15, to vote on the question of issuing $80,000 in bonds for street improvements.

MADISONVILLE, TENN.—The county court has decided to ask the legislature for authority to issue $100,000 in bonds for pike improvements.

MEMPHIS, TENN.—This county will ask the legislature for permission to issue $150,000 in bonds for turnpike improvements, according to reports.

NASHVILLE, TENN.—N. M. Leftwich, Jr., Cy. Engr., writes us that a number of persons have petitioned the council to pave West End Ave., with asphalt, to cost about $35,000. Nothing further as yet has been done.

ROGERSVILLE, TENN.—A bill is before the legislature providing for an issue of $100,000 in bonds for road improvements.

NELSONVILLE, O.—On Jan. 15 this city is said to have sold $4,000 in bonds for street improvements.

TOLEDO, O.—The council has authorized the issuance of $20,012 in bonds for paving Collingwood Ave., and $9,840 for paving Rosewood Ave.

DECATUR, IND.—It is stated this county has sold $24,489 of Monroe Township Central macadam road bonds, and $18,729 of Pleasant Valley and Oak Grove macadam road bonds.

SOUTH BEND, IND.—Press reports state that the people of this city have decided to build a boulevard 100 ft. wide along the St. Joseph River from this city to Mishawaka, to cost about $50,000.

TERRE HAUTE, IND.—The board of public works has directed City Engineer Sparks to prepare plans for the improvement of Fourth and Cherry Sts.

BAY CITY, MICH.—City Engineer Turner is preparing plans for paving Fourth Ave.——The street committee has recommended that the following streets be paved: West Midland, South Henry and Washington Sts.

SAGINAW, MICH.—Bids are asked until Feb. 1 for constructing 13,260 sq. yds. of brick pavement on Washington Ave., to cost about $27,564, and for repaving Perry St., to cost about $2,510. H. E. Terry, Cy. Engr.

COUNCIL BLUFFS, IA.—S. L. Etnyre, Cy. Engr., writes us that it is probable that most of the streets in the Fourth Ward, for which bids were recently received and rejected, will be paved with brick.

FAIRFIELD, IA.—The council is said to be considering the question of paving a number of the prinicipal streets.

LAWRENCE, KAN.—This city will construct about 20 blocks of brick pavement next season.

WICHITA, KAN.—The council has decided to pave about 20 blocks with brick next summer.

OKLAHOMA CITY, OKLA. TER.—This city will lay about ten blocks of brick pavement this year.

KANSAS CITY, MO.—The board of public works has been petitioned to pave Grove, 19th, Chestnut and 35th Sts. with asphalt.

OAKLAND, CAL.—The council has been asked to grade and macadamize Harper and Woolsey Sts.

## CONTRACT PRICES.

CEMENT.—Cincinnati, O.—We are informed that the following bids were received Jan. 21 by Capt. H. F. Hodges, U. S. Engr., for furnishing 10,000 bbls. of Portland and natural cements for locks 1 and 2, Big Sandy River, as advertised in Engineering News:

Bids Received at Cincinnati, O., Jan. 21, 1901, for Furnishing Portland and Natural Cement.

| Bidder. | Brand. | Portland cement, per barrel, delivered at Catletts-burg, In wood. | Catletts-burg, In paper. | Wright's Station, In wood. | Wright's Station, In paper. |
|---|---|---|---|---|---|
| Walter T. Bradley Co., Philadelphia, Pa. | Reading | $1.976 | $1.653 | $2.08 | $1.75 |
| Chicago Crushed Stone Co., Chicago, Ill. | Omega | 2.09 | 1.82 | 2.20 | 1.94 |
| Alpha Portland Cement Co., Easton, Pa. | Alpha | 1.776 | 1.56 | 1.966 | 1.77 |
| Castalia Portland Cement Co., Pittsburg, Pa. | Tiger | 1.87 | 1.65 | 1.99 | 1.77 |
| Diamond Portland Cement Co., Cleveland, O. | Diamond | 1.77 | 1.62 | 1.84 | 1.69 |
| Virginia Portland Cement Co., New York, N. Y. | Old Dominion | 1.50 | 1.35 | 1.50 | 1.35 |
| American Cement Co., Philadelphia, Pa. | Giant | 2.00 | 1.85 | 2.24 | 2.09 |
| O. W. Rafferty, Agent, Pittsburg, Pa. | Empire | 2.40 | 2.25 | 2.56 | 2.41 |
| Lehigh Portland Cement Co., Allentown, Pa. | Lehigh | 1.63 | 1.45 | 1.75 | 1.56 |
| Copley Cement Co., Allentown, Pa. | Saylors | 1.716 | 1.512 | 1.936 | 1.721 |
| Sears, Humbert & Co., Buffalo, N. Y. | Whitehall | 1.88 | 1.73 | 2.00 | 1.85 |
| The Atlas Portland Cement Co., New York | Atlas | 1.74 | 1.52 | 1.83 | 1.60 |
| Illinois Steel Co., Chicago, Ill. | Universal | 1.48 | 1.28 | 2.07 | 1.87 |
| | | Natural cement, per barrel | | | |
| L. H. McCammon Bros., Cincinnati, O. | Utica | $1.05 | $0.75 | $1.13 | $0.83 |
| American Cement Co., Philadelphia, Pa. | Union | .98 | .85 | 1.15 | 1.02 |
| J. B. Speed & Co., Louisville, Ky. | Star | 1.115 | .95 | 1.20 | 1.03 |

INSULATORS.—Washington, D. C.—The signal office, Washington, received the following bids Jan. 19, 1901, for furnishing 5,000 double petticoat and glass insulators, f. o. b. New York and Washington: (1) bid for double petticoat, (2) for pony, both f.o.b. New York; (3) double petticoat, (4) pony, both f.o.b. Washington:

| | 1. | 2. | 3. | 4. |
|---|---|---|---|---|
| Manhattan Elec. Sup. Co., N. Y. | $44.93 | $19.84 | $48.20 | $21.20 |
| Brookfield Glass Works, B'klyn | 45.85 | 22.25 | 50.05 | 21.95 |
| Jas. S. Barron & Co., New York | 45.85 | 20.25 | 48.85 | 21.75 |
| J. W. Bunnell, New York | 44.94 | 19.85 | 47.37 | 20.90 |
| The Burnett Co., New York | 36.00 | 17.00 | 39.00 | 18.00 |
| Western Electric Co., New York | 44.93 | 19.84 | 48.11 | 21.33 |
| C. S. Knowles, Boston, Mass. | 37.00 | 16.75 | 37.00 | 16.75 |
| Barber & Ross, Washington | 48.20 | 20.75 | 45.84 | 21.35 |

VALVES, SLUICE GATES, ETC.—Cincinnati, O.—The following bids were received by the water commissioners Jan. 22 for furnishing water valves, sluice gates and mud valves for the settling reservoirs and for the pump mains from the Eastern Pumping Station, as advertised in Engineering News; the Rensselaer Mfg. Co. have evidently put in gross amounts instead of per unit; on 72-in. sluice gates with stands the Coffin Valve Co. put in a bid of $975 on their own design; C. G. Roth, Clk.;

Bids Received at Cincinnati, O., Jan. 22, 1901, for Valves, Sluice Gates, Etc.

| Quantities. | Eddy Valve Co., Waterford, N. Y. | Rensselaer Mfg. Co., Troy, N. Y. | Michigan Brass & Iron Works, Detroit. | Coffin Valve Co., Boston. | Ludlow Valve Mfg. Co., Troy, N. Y. | Vulcan Iron Works, Chicago |
|---|---|---|---|---|---|---|
| Valves: 60" horizontal, flanged, by-passes, etc. 1 | $1,365.00 | $1,420.00 | $1,900.00 | $1,650.00 | $1,828.00 | $1,993.00 |
| 60-in. vertical, flangd, without by-passes, etc. 5 each | 1,150.00 | 5,750.00 | 1,800.00 | 1,410.00 | 1,562.00 | 1,607.00 |
| Horizontal, flanged, without by-passes, etc. 2 " | 1,150.00 | 2,300.00 | 1,850.00 | 1,475.00 | 1,506.00 | 1,820.00 |
| Vertical, flanged, without by-passes, etc. 4 " | 1,285.00 | 5,520.00 | 1,800.00 | 1,515.00 | 1,822.00 | 1,738.00 |
| Horizontal, double-bell, without by-passes 2 " | 1,240.00 | 2,670.00 | 1,850.00 | 1,541.00 | 1,782.00 | 1,879.00 |
| Double-bell, with by-pass, etc. 1 | 1,325.00 | 1,410.00 | 1,900.00 | 1,603.00 | 1,808.00 | 1,897.00 |
| Vertical, double-bell, with by-pass, etc. 1 | 1,325.00 | 1,420.00 | 1,900.00 | 1,550.00 | 1,818.00 | 1,861.00 |
| Horizontal, double-bell, without by-passes 3 each | 1,125.00 | 3,405.00 | 1,850.00 | 1,445.00 | 1,554.00 | 1,694.00 |
| Mud: 30-in., with base castings, etc. 2 " | 1,100.00 | 1,800.00 | 1,300.00 | 1,165.00 | 1,130.00 | 1,098.00 |
| 8-in. bell-and-spigot, with valve boxes 5 " | 20.00 | 90.00 | 22.50 | 19.00 | 18.50 | 24.69 |
| 8-in. bell-and-spigot, with hand wheels 2 " | 19.50 | 31.00 | 16.00 | 23.00 | 16.20 | 23.40 |
| 8-in. flanged, with iron bolts 4 " | 22.50 | 116.00 | 18.00 | 47.00 | 29.80 | 26.95 |
| 6-in. flanged, with iron bolts 4 " | 14.50 | 64.00 | 16.50 | 16.00 | 17.65 | 18.46 |
| 6-in. flanged, with bronze bolts 3 " | 16.50 | 54.00 | 16.50 | 22.00 | 19.30 | 23.65 |
| 6-in. double-spigot, with valve boxes 4 " | 15.00 | 75.20 | 22.50 | 17.00 | 15.25 | 24.65 |
| 4-in. flanged, with iron bolts 7 " | 9.00 | 59.50 | 7.50 | 13.00 | 11.40 | 11.00 |
| 4-in. double-spigot, with valve boxes 31 " | 10.50 | 279.00 | 8.00 | 13.00 | 9.60 | 11.80 |
| Sluice gates: 72-in., with stands, etc. 2 " | 1,200.00 | 2,580.00 | 1,600.00 | 1,375.00 | 1,355.00 | 1,292.00 |
| Total | $28,445 | $94,757 | $41,423 | $34,381 | $37,571 | $38,962 |

LEVEE.—Tallulah, La.—J. T. McClellan, Pres. Fifth Louisiana Levee Board, Tallulah, writes us that the following bids were received Jan. 19, 1901, for constructing the Vidalia levee: (1) long haul work, (2) short haul work, (3) average: H. F. Hodge, Natchez, Miss., (3) 44.95 cts.; Donovan & Daley, Lake Providence, La., (3) 33 cts.; Ogden Bros. & Parks, Baton Rouge, La., (1) 41.99 cts.; (2) 15.97 cts.; H. F. Garbish, Huldah, La., (1) 35 cts., (2) 13 cts., (3) 25.37 cts.; R. T. Clark, Bulletts Bayou, La., (1) 49.23, (2) 17 cts.; W. F. Balbour & Son, Baton Rouge, La., (1) 48 cts., (2) 14 cts.; Batt O'Brien, Fairview, La., (1) 44 cts., (2) 13.98 cts.

PIPE SEWERS.—New York, N. Y.—The following bids were received by the department of sewers Jan. 23 for a 15-in. pipe sewer in East 171st st.; the Brennan bid was the lowest, at $3,695, for sewer in 156th St., and W. E. Welch's, at $6,802, for sewer in McComb's Road:

Bids Received at New York, N.Y., Jan. 23, 1901, for Constructing a 15-in. Pipe Sewer in East 171st St.

| Bidder. | Pipe 15-in., 830 ft. | Pipe 12-in., 480 ft. | Spurs, 200 each. | Manholes, 15 each. | Basins, 2 each. | Rock, 6,000 yds. | Total. |
|---|---|---|---|---|---|---|---|
| W. J. Moore, 170 East 89th St. | $2.50 | $2.00 | $1.00 | $60.00 | $150.00 | $3.00 | $22,565 |
| Briggs & McLaughlin, 585 East 134th St. | 3.00 | 2.50 | .... | 50.00 | 150.00 | 3.00 | 27,740 |
| J. J. McQuade, 1289 Lexington Ave. | 2.75 | 2.50 | 1.00 | 70.00 | 150.00 | 2.50 | 19,733 |
| W. J. Ford, 129 West 125th St. | 4.00 | 3.00 | .50 | 50.00 | 200.00 | 3.25 | 25,510 |
| J. C. Rodgers, Jr., 31 West 125th St. | 15.00 | 12.00 | .50 | 50.00 | 150.00 | .... | 19,300 |
| P. F. Brennan, New York | 5.00 | 5.00 | ... | 75.00 | 175.00 | 3.00 | 26,000 |

BRICK PAVING.—Tampa, Fla.—F. T. Warren, Engr. Bd. Pub. Wks., writes us that the following bids were received Jan. 15, 1901, for paving portions of 16th, 17th, Tampa, and Madison Sts., with brick; contract awarded W. L. Spitler:

| Bidder. | Vit. brick pavem't, 17,850 sq.yds. | Granite curbing 8,465 lin. ft. | Total. |
|---|---|---|---|
| W. L. Spitler, Tampa, Fla. | $1.68 | $0.45 | [illegible] |
| Edenfield & Jetton, Tampa, Fla. | 1.73 | .48 | [illegible] |
| W. H. Kendrick, Tampa, Fla. | 1.84 | .45 | [illegible] |
| J. W. Sibley, Birmingham, Ala. | 1.88 | .53 | [illegible] |
| So. Pvg & Cnstn Co., Chatt'n'ga | 1.93 | .49 | [illegible] |

FIRE HOSE.—Los Angeles, Cal.—We are informed that the following bids were received Jan. 14, 1901, for furnishing 4,000 ft. of 2½-in. and 1,000 ft. of 3-in. cotton fire hose: Pacific Coast Mfg. Co., 4,000 ft. 2½-in. "Ajax" hose, 80 cts. per ft., net; 1,000 ft. 3-in. "Ajax" at $1 per ft., net. N. Y. Belting & Packing Co., by Lewis Booth & Sons, 4,000 ft. 2½-in. "Dragon" hose, 85 cts., 1,000 ft. 3-in. "Dragon" hose, $1.10; Fabric Fire Hose Co., N. Y. Belting & Packing Co., Ltd., by Levi Booth & Sons, 4,000 ft. 2½-in. "Keystone" hose, 90 cts., 1,000 ft. 3-in. "Keystone" hose, $1.15, or 4,000 ft. 2½-in. "Patrol" hose, 80 cts., 1,000 ft. 3-in. "Patrol" hose, $1.05; Boston Woven Hose & Rubber Co., by Hawley, King & Co., 2½-in. Bay State, 80 cts. (2 ply), 3-in., $1 (2 ply), 3-in. $1.15 (3 ply). California Hardware Co., 2½-in. "Mastiff" hose, 80 cts. (4,000 ft.), 3-in. $1 (1,000 ft.); Crane Co., 4,000 ft. 2½-in. "Imperial" seamless tube, 71¼ cts. per lin. ft., 1,000 ft. 3-in. "Imperial" seamless tube, $1.39; Manhattan Rubber Mfg. Co., by Newell Mathews Co., 4,000 ft. 2½-in. "Manhattan" hose, 80 cts., 4,000 ft. "Farragut" hose, 90 cts.; Goodyear Rubber Co., by J. L. Latham, 2½-in. "New Peerless" hose, 80 cts., 3-in. "New Peerless" hose, 95 cts; Jas. W. Hellman, 4,000 ft. "Glenwood" hose 2½-in. 72½ cts., 4,000 ft. 2½-in. "Sunset" brand, 67 cts.; Harper & Reynolds Co., 2½-in. "Victor Jacket" at 80 cts. per ft., 2½-in. "Reliance Jacket," 70 cts., 2½-in. "Guardian Jacket," 65 cts., 3-in. "Victor Jacket," 3 ply, 95 cts., 3-in. double "Victor Jacket," 85 cts., 3-in. 3 ply "Reliance Jacket," 85 cts., 3-in. double jacket "Reliance," 75 cts.; Los Angeles Rubber Co., 4,000 ft. 2½-in. "Glenwood" brand, 70 cts., 1,000 ft. 3-in. "Glenwood," 88 cts.; Case & Smurr Stove Co., 4,000 ft. 2½-in. "Paragon" hose, 90 cts. per ft., 1,000 ft. 3-in. "Paragon," $1.10, also 4,000 ft. 2½-in., N. J. Car Spring & Rubber Co., A-1, 90 cts. per ft., 1,000 ft. 3-in. N. J. Car Spring & Rubber Co., A-1, $1.10 per ft.

FIRE HOSE.—Indianapolis, Ind.—Edward H. Davis, Secy. Bd. Pub. Safety, writes us that the following bids were received Jan. 18, 1901, for furnishing 7,000 ft. of 2½-in. fire hose:: Fabric Fire Hose Co., 150 Lake St., Chicago, Unique brand $1, Keystone 90 cts. (500 ft. bought), Horseshoe 80 cts.; Eureka Fire Hose Co., New York, Eureka brand $1, Paragon 90 cts. (2,500 ft. bought), Peerless 80 cts.; Boston Woven Hose & Rubber Co., Boston, Boston Fire Jacket, 85 cts.; Manhattan Rubber Mfg. Co., 103 Lake St., Chicago, Mohican Knit 80 cts., Manhattan 75 cts., White Jacket 70 cts.; Central Rubber & Supply Co., Indianapolis, Diamond brand, 80 cts.; Chicago Fire Hose Co., Chicago, National Jacket, 90 cts. (2,500 ft. bought); Gorden & Harmon, Indianapolis, Glenwood hose 76½ cts.; Boston Belting Co., Taylor & Smith, Indianapolis, Imperial, 75 cts.; Gutta Percha & Rubber Mfg. Co., Duckwall & Harman Co., Indianapolis, Heavy Ajax, 90 cts.; New Jersey Car Spring & Rubber Co., New York, Aurora Jacket, 90 cts. (1,000 ft. bought); B. F. Goodrich Fire Hose Co., Akron, O., Goodrich Jacket, 90 cts. (500 ft. bought); Miller Oil & Supply Co., Indianapolis, Hoosier, 90 cts.; Cornelius Callahan Co., Boston, Jacket hose, 75 cts.

SANDSTONE PAVING.—Duluth, Minn.—Watterworth & Fee, have been awarded the contract at $1.777 a sq. yd. for 13,563 yds. of Kettle River sandstone paving in Michigan St.

DITCHING.—Wellston, O.—Edward Washburn has been awarded the contract at 9¾ cts. a lin. ft. for digging 2,600 ft. of ditch for a 4-in. water main.

BRIDGES.—Chicago, Ill.—We have received the following bids opened on Jan. 16 by the Sanitary District Commissioners, Security Bldg., for furnishing and erecting the sub and superstructures for several lift bridges across the Chicago River, as advertised in Engineering News:

FIRE HOSE.—South Bethlehem, Pa.—J. D. Hartigan, Chn. Fire Com., writes us that the following bids were received Jan. 21, 1901, for furnishing 500 ft. of fire hose: Fabric Hose Co., New York, 90 cts., 80 cts., and 70 cts. per ft. for 3-ply cotton hose, rubber lined; Eureka Hose Co., New York, 90 cts.; N. Y. Belt & Packing Co., New York, 80 cts., 70 cts., 60 cts.; Frank Bosch, Philadelphia, agent for the Paragon brand, 90 cts. and 75 cts.

boilers, and tubing. The company will build a plant at Kensington, which will employ about 500 men. The plans have been completed and ground will be broken very soon. The materials have been arranged for, but the contract for erection is not yet awarded. The main building will be of iron 300 × 80 ft., and one story in height. Harvey K. Flagler, Pres., and Chas. H. Twist, Treas., Boston.

BIDS RECEIVED AT CHICAGO, ILL., JAN. 16, 1901, FOR FURNISHING AND ERECTING THE SUB AND SUPERSTRUCTURES FOR SEVERAL LIFT BRIDGES.

Superstructure for Canal St. Bridge, with By-Pass.

| Bidder. | Super. and substructure, metal as specified. | Price bid per lb.—For furnishing pit linings. | Medium soft steel. | Iron castings. | Extra—Cast-steel track plates. | Steel & machinery castings. | Phosphor brnz. | C'nterweight block castgs. | Y. pine or oak per M. ft. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| American Bridge Co., New York | $71,100 | $0.0295 | $0.0375 | $0.03 | $0.0750 | $0.10 | $0.50 | $0.015 | $50.00 | $3,121 |
| C. L. Strobel, Chicago | 76,400 | .05 | .05 | .045 | .10 | .10 | .50 | .0225 | 50.00 | 5,290 |
| Illinois Bridge Co., Chicago | 77,000 | .05 | .06 | .05 | .075 | .10 | .50 | .02 | 42.00 | 5,290 |
| Hansell-Elcott Foundry Co. Chicago | 77,500 | .0325 | .0425 | .0385 | .075 | .095 | .48 | .014 | 60.00 | 3,439 |
| Toledo Bridge Co., Toledo, O. | 79,500 | .0265 | .04 | .04 | .0550 | .08 | .40 | .0225 | 40.00 | 2,804 |
| The King Bridge Co., Cleveland, O. | 81,000 | .035 | .055 | .045 | .07 | .08 | .45 | .02 | 38.00 | 3,703 |
| Massillon Bridge Co., Massillon, O. | 82,400 | .045 | .045 | .08 | .10 | .10 | .50 | .02 | 40.00 | 4,761 |
| Milwaukee (Wis.) Bridge & Iron Co. | 83,000 | .045 | .045 | .045 | .08 | .08 | .50 | .025 | 40.00 | 4,761 |
| Indiana Bridge Co., Muncie, Ind. | 84,900 | .04 | .04 | .03 | ... | .10 | .50 | .03 | 50.00 | 4,232 |
| Phoenix Bridge Co., Chicago, Ill. | 119,352 | .055 | .06 | .06 | .095 | .095 | .25 | .035 | 50.00 | 5,819 |

Note.—The totals for Canal St. is total extra cost for furnishing counterweight of 105,800 lbs.

The following are the lump sums for the (1) superstructure and substructure of metal as specified; and, (2) for total extra cost for furnishing extra materials; the items not being given as the bids are the same as those for the Canal St. bridge; no bids for pit lining or extra cast-steel track plates, or totals for extras are in the Ashland Ave. operation:

| Bidder. | Harrison St.; 95,650 lbs. 1. | Harrison St.; 95,650 lbs. 2. | Main St.; 89,000 lbs. 1. | Main St.; 89,000 lbs. 2. | Ashland Ave. 1. |
|---|---|---|---|---|---|
| Am. Bridge Co. | $86,800 | $2,822 | $72,800 | $2,626 | $94,000 |
| C. L. Strobel | 97,980 | 4,783 | 91,200 | 4,450 | 102,200 |
| Milwaukee B. & I. Co | 98,900 | 4,304 | 93,700 | 4,005 | 115,000 |
| King Bridge Co. | 99,000 | 3,348 | 94,000 | 3,115 | 117,000 |
| Toledo Bridge Co. | 104,000 | 2,535 | 98,000 | 2,359 | 95,000 |
| Indiana Bridge Co. | ..... | ..... | ..... | ..... | 107,900 |
| Massillon Bdge Co. | ..... | ..... | ..... | ..... | 91,200 |

Bids for Substructures for Canal, Harrison and Main Sts. Bridges.

For Canal St. Bridge, with By-Pass.

| Bidder. | Excavation, 6,300 cu. yds. | Sheet piling and bracing 324 M. ft. B.M. | Oak timb'r (wales) 8,600 ft. B.M. | Piles—Delivered, Pine or oak, 40,992 ft. | Piles—Delivered, Oak protection, 5,490 ft. | Piles—Driven, Foundation, 27,972 ft. | Piles—Driven, Protection, 5,490 ft. | Portland cem. concrete, 3,280 yds. | Pit linings, Portld cement, 90 yds. | Pit linings, Steel, 105,800 lbs. | Substructure metal, 70,100 lbs. | Lump sum—Removal of sub. and superstructure. | Lump sum—For sewer work. | Lump sum—Maintenance water tunnel. | Lump sum—Sinking shaft, 65 lin. ft. | Lump sum—Extension water tunnel, 25 lin. ft. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lydon & Drews Co. | $0.52 | $37.00 | $47.00 | $0.17 | $0.27 | $0.13 | $0.07 | $5.50 | $9.50 | $0.005 | $0.005 | $6,000 | ..... | .... | ..... | ..... | $53,914 |
| Fitzsimmons & Connell Co. | .45 | 40.00 | 45.00 | .17 | .25 | .25 | .20 | 5.50 | 17.50 | .01 | .008 | 6,000 | ..... | .... | ..... | ..... | 59,812 |
| Geo. W. Jackson Construction Co. | .54 | 37.70 | 42.00 | .22 | .22 | .15 | .11 | 7.00 | 24.00 | .008 | .005 | 5,000 | ..... | .... | ..... | ..... | 62,267 |
| Thomas Phee | .75 | 40.00 | 47.00 | .20 | .22 | .30 | .25 | 5.75 | 15.00 | .008 | .005 | 4,000 | ..... | .... | ..... | ..... | 62,613 |
| James A Sackley | .90 | 36.00 | 35.00 | .16 | .25 | .23 | .23 | 6.80 | 7.00 | .01 | .01 | 5,255 | ..... | .... | ..... | ..... | 63,210 |
| For Harrison St. Bridge. | | | | | | | | | | | | | | | | | |
| | 5,060 cu. yds. | 400 M. ft. B.M. | 14,000 ft. B.M. | 37,980 ft. | 10,500 ft. | 23,180 ft. | 10,500 ft. | 3,830 yds. | 86 yds. | 95,650 lbs. | 143,690 lbs. | | | | | | |
| Lydon & Drews Co. | $0.52 | $37.00 | $47.00 | $0.17 | $0.27 | $0.13 | $0.07 | $5.50 | $9.50 | $0.005 | $0.005 | $1,200 | $1,000 | .... | ..... | ..... | $56,408 |
| Fitzsimmons & Connell Co. | .45 | 40.00 | 45.00 | .17 | .25 | .25 | .20 | 5.50 | 17.50 | .01 | .008 | 2,500 | 1,390 | .... | ..... | ..... | 64,378 |
| Geo. W. Jackson Construction Co. | .54 | 37.70 | 42.00 | .22 | .22 | .15 | .09 | 6.30 | 24.00 | .008 | .005 | 4,000 | 2,220 | $600 | ..... | ..... | 67,937 |
| Thomas Phee | 1.50 | 48.00 | 57.00 | .22 | .26 | .32 | .25 | 6.15 | 17.00 | .008 | .005 | 5,000 | 5,500 | .... | ..... | ..... | 85,669 |
| For Main St. Bridge. | | | | | | | | | | | | | | | | | |
| | 9,000 cu. yds. | 380 M. ft. B.M. | 15,400 ft. B.M. | ..... ft. | 9.000 ft. | ..... ft. | 9,000 ft. | 4,160 yds. | 90 yds. | 89,000 lbs. | 57,890 lbs. | | | | | | |
| Lydon & Drews Co. | $0.52 | $37.00 | $47.00 | $0.17 | $0.27 | $0.13 | $0.07 | $5.50 | $9.50 | $0.005 | $0.005 | $1,200 | $250 | $50 | $33.00 | $33.00 | $51,913 |
| Fitzsimmons & Connell Co. | .75 | 38.00 | 45.00 | .15 | .25 | .25 | .20 | 5.50 | 17.50 | .01 | .008 | 2,500 | 440 | .... | 50.00 | 25.00 | 58,527 |
| Geo. W. Jackson Construction Co. | .54 | 37.70 | 42.00 | .22 | .22 | .11 | .09 | 6.30 | 24.00 | .008 | .005 | 3,800 | 360 | 600 | 38.00 | 32.00 | 59,978 |
| Thomas Phee | .80 | 44.00 | 50.00 | .19 | .22 | .31 | .28 | 5.60 | 15.00 | .008 | .005 | 2,500 | 1,200 | .... | 30.00 | 42.00 | 61,493 |
| W. M. Crilly | 1.125 | 37.50 | 50.00 | .16 | .225 | .25 | .125 | 6.76 | 17.25 | .01 | .01 | 2,050 | 350 | 250 | 30.00 | 30.00 | 64,788 |
| James A Sackley | .90 | 36.00 | 35.00 | .16 | .25 | .23 | .23 | 6.80 | 7.00 | .01 | .01 | 4,276 | 25 | 25 | 46.00 | 46.00 | 65,492 |
| John P. Agnew | .78 | 45.50 | 60.00 | .22 | .27 | .47 | .47 | 7.35 | 19.00 | .02 | .013 | 4,500 | 1,100 | 250 | 90.00 | 45.00 | 80,109 |

Substructure for Ashland Ave. Bridge.

| Bidder. | Excavation, 6,500 cu. yds. | Sheet piling and bracing, 250,000 ft., B.M. | Oak timber in wales, 23,500 ft., B.M. | Piles—Delivered, Pine or oak. | Piles—Delivered, Oak protection 7,280 ft. | Piles—Driven, Foundation. | Piles—Driven, Protection 7,280 ft. | Portlnd cem't concrete, 2,820 yds. | Lump sum—Removal of old structure. | Lump sum—For sewer work. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Page & Shnable | $0.54 | $35.00 | $39.00 | ..... | $0.20 | ..... | $0.25 | $5.22 | $4,120 | $250 | $35,543 |
| Lydon & Drews Co. | .62 | 44.00 | 54.00 | $0.20 | .30 | $0.19 | .09 | 5.75 | 3,500 | 500 | 39,353 |
| Fitzsimmons & Connell Co. | .75 | 38.00 | 50.00 | .15 | .25 | .25 | .20 | 5.75 | 5,500 | 250 | 40,791 |
| Geo. W. Jackson Const'n Co. | .54 | 37.70 | 42.00 | .22 | .22 | .11 | .09 | 6.30 | 7,000 | 400 | 41,345 |
| Thomas Phee | 1.00 | 46.00 | 54.00 | .20 | .22 | .30 | .25 | 6.00 | 3,000 | 500 | 43,111 |
| W. M. Crilly | 1.47 | 37.50 | 50.00 | .16 | .225 | .25 | .125 | 6.76 | 1,437 | 500 | 43,653 |
| James A. Sackley | .60 | 36.00 | 35.00 | .16 | .25 | .23 | .23 | 6.80 | 10,737 | 200 | 47,330 |
| John P. Agnew | .78 | 45.50 | 60.00 | .22 | .27 | .45 | .45 | 7.35 | 4,800 | 700 | 49,324 |

The totals in the Canal, Harrison and Main St. operations include both alternatives for finishing the counterweight pits. If Portland cement pit lining is used the cost of the steel pit lining must be subtracted; if, on the other hand, the steel pit lining is used, the item for Portland cement pit lining must be subtracted to get the correct figure.

BRICK SEWER.—Washington, D. C.—D. E. McComb, Supt. Sewers, informs us that the following bids were received by the District Commissioners Jan. 26, 1901, for furnishing the materials and for constructing portions of the New Jersey Ave. and Tiber Creek sewer:

| Items. | A. Gleeson, Washington, D.C. | John Jacoby, Wilmington, Del. |
|---|---|---|
| Excavation, a cu. yd. | $0.98 & $1.50 | $1.00 |
| Brick masonry, a cu. yd. | 9.80 " 12.00 | 10.00 |
| Vit. brk. mas'ry, cu. yd. | 18.80 " 20.00 | 20.00 |
| Concrete, a cu. yd. | 4.85 " 7.50 | 6.00 |
| Conc., Prtld, "A," a yd. | $8.70 | 12.00 |
| Conc., Prtld, "B," a yd. | 6.90 | 8.00 |
| Piling, a lin. ft. | .38 | .30 |
| Lumber, a M. ft., B. M. | 39.00 | 30.00 |
| Steel beams, a lb. | .05 | .03 |
| Cast iron, a lb. | .04 | .02¼ |
| Tide gates, each | 249.50 | 225.00 |
| Iron frms & cvrs each | 58.75 | 75.00 |
| Granite coping, a cu. yd. | 3.60 | 3.50 |
| Iron frms & cvrs. each | 71.25 | 85.00 |
| Total | $84,505 & $80,808 | $87,744 & $85,304 |

DAM.—New York, N. Y.—The Aqueduct Commission received the following bids Jan. 29 for building the Muscoot dam on Croton River; the award will be made on Feb. 5:

GUN FORGINGS.—Washington, D. C.—The Bureau of Ordnance, Navy Dept., received the following bids Jan. 28, 1901, for furnishing 24 sets of 8-in., and 84 sets of 6-in. gun forgings: 8-in. forgings—Midvale Steel Co., 22 cts. a lb., commence delivery in 60 days, complete in 405 days; Bethlehem Steel Co., same proposition. 6-in. forgings.—The Atha Steel Co., Newark, N. J., on 30 sets only, 21½ cts. a lb., commence delivery in 90 days, complete in 450 days; Midvale company 22 cts., commence delivery in 40 days, complete in 870 days; Bethlehem company, same.

STEEL SHAFTING.—Cincinnati, O.—The Variety Iron Works, of Cleveland, has been awarded the contract at $3,200, for extending the steel shafting weighing 53,000 lbs.

RIP-RAP STONE.—Tompkinsville, (S. I.), N. Y.—Jas. Murray, of New York city, has been awarded the contract at $1.92 a ton by the engineer of the third lighthouse district for placing 300 tons of rip-rap stone at the Romer Shoal, N. Y., light station. E. S. Belden, Hartford, Conn., submitted the only other bid at $2.93.

## MANUFACTURING PLANTS.

BUFFALO, N. Y.—The United States Tube Co. has been incorporated, with $1,000,000 capital stock, for the purpose of manufacturing lap-welded steel and iron boiler tubes for locomotives, marine, tubular and stationary

Bids Received at New York, N. Y., Jan. 29, 1901, for Constructing the Muscoot Dam.

| Quantities. | Leason & Doherty, 215 W. 125th St., N. Y. | Beckwith & Quackenbosh, Herkimer Co., N. Y. | C. Stevens & Son, Point Pleasant, N. J. | J. J. Hart Co., 16 Broad St., N. Y. | Colman, Brushaw & Colman, Croton, N. Y. | J. W. Cody, 1133 B'way, N. Y. | O'Hern & Berrigan, 3 Palisade Ave., Yonkers. | Dwyer & Smith, Syracuse, N. Y. | D. W. Maloney, White Plains, N. Y. |
|---|---|---|---|---|---|---|---|---|---|
| Soil ..... 500 cu. yds. | $0.45 | $0.25 | $0.50 | $0.40 | $0.36 | $0.50 | $0.30 | $0.50 | $1.00 |
| Sodding ..... 500 sq. " | .20 | .30 | .30 | .40 | .25 | .40 | .25 | .45 | .40 |
| Earth excvtn. 105,000 cu. " | .40 | .27 | .40 | .35 | .28 | .30 | .28 | .32 | .40 |
| In trenches . 4,000 " " | 1.00 | 1.00 | 1.00 | .50 | 1.20 | 2.00 | .50 | .45 | 1.50 |
| Filling, etc. 3,000 " " | .25 | .27 | .25 | .30 | .30 | .50 | .40 | .50 | .40 |
| Rock ..... 25,000 " " | 1.50 | 1.15 | 1.75 | 1.37 | 1.33 | 2.00 | 1.20 | 1.20 | 1.50 |
| Dredging ..... 1,500 " " | 1.50 | .60 | 2.00 | .10 | 1.00 | 3.00 | .15 | 1.00 | 1.25 |
| Lumber ..... 250 M. ft. | 40.00 | 30.00 | 50.00 | 20.00 | 30.00 | 50.00 | 10.00 | 32.00 | 40.00 |
| Tongued, etc. 75 " " | 45.00 | 40.00 | 60.00 | 20.00 | 40.00 | 55.00 | 20.00 | 35.00 | 50.00 |
| Piles ..... 7,500 lin. ft. | .25 | .25 | .30 | .15 | .20 | .20 | .15 | .15 | .30 |
| Portland cem't. 100 bbls. | 2.50 | 2.00 | 2.50 | 3.00 | 3.50 | 3.00 | 3.00 | 3.00 | 3.50 |
| Concrete ..... 100 cu. yds. | 4.50 | 6.50 | 8.00 | 8.00 | 6.00 | 7.50 | 4.50 | 8.00 | 7.00 |
| Masonry: Brk. 100 " " | 10.00 | 16.00 | 10.00 | 14.00 | 12.00 | 12.00 | 12.00 | 10.00 | 14.00 |
| Rubble ..... 15,000 " " | 4.20 | 4.00 | 4.25 | 3.60 | 4.05 | 4.50 | 3.40 | 3.50 | 4.25 |
| Portld, 1:2. 2,000 " " | 5.25 | 5.00 | 4.75 | 4.75 | 5.40 | 6.00 | 4.75 | 4.10 | 5.58 |
| 1 to 3 .. 5,000 " " | 4.80 | 4.50 | 4.50 | 4.50 | 4.95 | 5.50 | 4.40 | 3.70 | 5.50 |
| Dry & pvg 1,600 " " | 1.75 | 2.00 | 2.75 | 2.25 | 2.50 | 4.50 | 2.50 | 2.00 | 3.50 |
| Rip-rap ..... 5,000 " " | 1.25 | 1.20 | 1.00 | .60 | .75 | 1.50 | .40 | 1.00 | 1.25 |
| Broken stone . 1,700 " " | 1.00 | 1.25 | 1.50 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 2.50 |
| Block stone . 2,000 " " | 12.00 | 11.50 | 20.00 | 13.00 | 19.00 | 15.00 | 12.00 | 12.00 | 21.00 |
| Granite dimn. 600 " " | 40.00 | 22.50 | 40.00 | 29.00 | 31.00 | 30.00 | 35.00 | 25.00 | 28.00 |
| Split stone .. 50 " " | 1.50 | 12.00 | 5.00 | 4.00 | 7.00 | 10.00 | 5.00 | 8.00 | 7.00 |
| R'ble face work 6,000 sq. " | .30 | .40 | .40 | .71 | .60 | .50 | .50 | .10 | .35 |
| C-cut work ... 7,000 sq. ft. | .75 | .60 | .60 | .60 | .70 | .80 | .50 | .75 | .95 |
| Rough ptg face 5,000 " " | .25 | .30 | .25 | .35 | .40 | .50 | .35 | .40 | .50 |
| Metal roof, etc. | 1.020 | 4.000 | 2.000 | 2,642 | 2,200 | 1.200 | 3,000 | 1,500 | 1,800 |
| Frame foot brd 220 lin. ft. | 9.00 | 7.70 | 5.00 | 8.00 | 10.00 | 3.75 | 1,500 | 3.50 | 4.50 |
| Total | $271,410 | $233,589 | $298,100 | $238,787 | $261,904 | $302,955 | $548,547 | $221,345 | $299,225 |

BROOKLYN, N. Y.—Thomas M. Farley, proprietor of the Brooklyn Bedstead & Bedding Co., of this city, has purchased a piece of ground on which will be erected a six-story building, to be used in the manufacture of brass bedsteads and bedding. The new plant will cost $100,000.

PHILADELPHIA, PA.—Plans are being prepared by Geo. T. Pearson, Arch., 427 Walnut St., for a seven-story addition, 46 × 200 ft., to the factory of the John B. Stetson Co., Fourth St. and Montgomery Ave.——Plans have been filed by Henry C. Fox & Sons for a factory building, 50 × 100 ft., two stories, to be used in the manufacture of glass. The new building will be located at Schulykill Ave. and Catherine St.——J. T. Aiken, of this city, has been awarded a contract by the Philadelphia Rolling Machine Co., for building an addition to its foundry building at 23d and Carpenter Sts.——Plans are to be prepared by Addison Hutton, Arch., 400 Chestnut St., for a four-story factory, 60 × 114 ft., at Seventh and Spring Garden Sts., for Mitchell Fletcher & Co.

PITTSBURG, PA.—The Columbia Glass Co. has been chartered with $500,000 capital stock. The company will erect a plant to have a capacity of about 5,000 sq. ft. of plate glass a day. Washington D. Keys, Alex. Taylor and John W. Thomas are interested.

SHARON, PA.—The Sharon Steel Co. has increased its capital stock to $800,000, and will go ahead with the improvements decided on some time ago, which will consist of doubling its present capacity.

WILKESBARRE, PA.—The Babylon Breaker, at Duryea, was destroyed by fire on Jan. 22, causing a loss of about $125,000.

WASHINGTON, D. C.—Bids are asked until March 1 for building an ice plant at the Rice Station Indian School, Ariz. W. A. Jones, Comr. of Indian Affairs, Washington.

NEWPORT NEWS, VA.—The Newport News Ladder Co. has been chartered with $50,000 capital stock. The company has been manufacturing its patent ladder at the plant of the D. S. Jones Lumber & Mfg. Co. and will now erect a plant of its own. The buildings are not decided on. The plant will employ about 50 hands. J. R. Curry, Pres.; B. R. Garry, Vice-Pres.; J. E. Warren, Secy.

BIRMINGHAM, ALA.—John C. Brain, Gen. Mgr. Standard Fertilizer Mfg. Co., Florence Hotel, writes us that the contracts for building the company's plant of seven buildings, estimated to cost $200,000, will be let in March, and the equipment, which will cost about $200,000, will be purchased in February. Two engines, eight boilers, pulverizers for crushing slag, electric light plant, etc., will be required. The company will manufacture Brainite fertilizer.

NEW ORLEANS, LA.—The directors of the New Orleans Cold Storage Co. have decided to increase the capital stock from $65,000 to $130,000, the proceeds to be used to defray the cost of the proposed new plant.

ASHLAND, KY.—The Norton Iron & Steel Works, of this place, will add a plant for drawing wire and making wire nails, to cost about $40,000.

YOUNGSTOWN, O.—Sites are reported secured for the two mills to be erected here by the American Steel & Hoop Co. Contracts will soon be awarded. Frank Clark, Mgr.

ZANESVILLE, O.—Reports state that the Eastern Tube Co., recently organized, will at once build a tube plant in Zanesville to cost about $1,000,000. The plant is to have a capacity of 800 tons of finished product a day and will give employment to about 1,500 men. The works are to be completed by June 1. Turner A. Beall, 26 Broadway, New York, and Wm. M. Carr, Pres. Bd. of Trade, Zanesville, are interested. Mr. Beall writes us that the

above report is substantially correct. Most of the contracts for the buildings and machinery have been let, and bids are being received for the remainder.

MISHAWAKA, IND.—The Dodge Manufacturing Co., of Mishawaka, is about to extend its machine shop and foundry. The two buildings will be practically duplicates of each other, 200 x 125 ft., of steel construction, with gravel roof and side walls of brick. Each will be provided with a 35-ton electric traveling crane, together with the necessary heating apparatus and sprinkler equipment. A new 72-in. cupola will be installed in the foundry, and the electrical equipment of the plant increased by the addition of a 150-K-W. generator and engine. It is also proposed to increase the main driving power by the addition of a 28 x 48-in. Corliss engine. Bids for the construction and equipment are now being considered.

DETROIT, MICH.—The Standard Portland Cement Co., of Detroit, will erect a new plant at Lakeland, with a capacity of from 1,000 to 3,000 barrels.

FLINT, MICH.—The Imperial Wheel Co., recently organized, contemplates building a carriage wheel factory for which plans and specifications are now being prepared. The necessary equipment will be approximately as follows: four 150-HP. water-tube boilers, two 200-HP. low-speed engines, one 125-K-W. belted generator, conveyors, shafting, belting, blowers, drying kilns, sprinkling and direct steam-heating systems, and about 175 HP. in small motors for driving special machinery. The specifications will be ready about Feb. 7. Field & Hinchman, Consulting Engrs., Majestic Bldg., Detroit.

JACKSON, MICH.—F. Felkel, Engr. and Arch., of Pittsburg, Pa., is preparing plans for the new plant of the Southern Engine & Boiler Works in this place. The plant will consist of a machine shop, foundry, woodworking and pattern shop, pattern storage, boiler house and engine-room, blacksmith shop and alterations to boiler shop.

CHICAGO, ILL.—The Foley & Williams Mfg. Co. will build a four-story addition to its factory on 45th Place, to be 75 x 75 ft., and to cost $20,000.

LACROSS, WIS.—The LaCross Brewing Co., a combination of the brewers of this place, has been incorporated with $1,200,000, and will probably erect a new brewery, to cost about $300,000. Joseph Bochert, Pres.; Chas. Mitchell, Vice-Pres.

CHANUTE, KAN.—A company has been organized in this place to build a 20-ton ice plant. The capital stock is $15,000. R. R. Allen, Pres.; H. J. Prange, Vice-Pres.

HEARNE, TEX.—P. S. Grogan, Vice-Pres. and Mgr. Planters' Oil Co., writes us that the contracts for the equipment for the company's cotton-oil plant, which will cost about $40,000, will be let on Feb. 15. The equipment will consist of two engines, two boilers, one dynamo, all presses, gins, heaters, etc. The contract for the buildings are let.

SAN FRANCISCO, CAL.—The Alcatraz Asphalt Co. has asked for permission to erect a portable asphalt paving plant in this city, to be operated by steam power.

## MISCELLANEOUS CONTRACTS.

SURVEYS.—Olympia, Wash.—Bids are asked until Feb. 11 for making surveys. E. P. Kingsberry, Surveyor Gen.

DOCK.—Milkauwee, Wis.—Bids are asked by the commissioners of public works until Jan. 31 for constructing a dock in the Milwaukee River.

BEACONS.—Mobile, Ala.—Bids are asked until Feb. 19 for erecting tow beacons at East Pass, Choclawhatchee Bay, Fla. Lieut.-Col. A. N. Damrell, U. S. Engr.

REPAIRING LIGHTHOUSE.—Mobile, Ala.—Bids are asked until Feb. 18 for constructing repairs to the light station at Calcasieu, La. Lieut.-Col. A. N. Damrell, U. S. Engr.

OBSERVATION TOWER.—Wilmington, N. C.—Bids are asked until Feb. 28 for erecting an observation tower at Fort Caswell, as stated in our advertising columns. Capt. E. W. Van C. Lucas, U. S. Engr.

DREDGING.—Newport, R. I.—Bids are asked until Feb. 28 for dredging in the Providence River and Narragansett Bay, R. I., as stated in our advertising columns. Maj. George W. Goethals, U. S. Engr.

HYDRAULIC DREDGE.—Galveston, Tex.—Bids are asked until Feb. 28 for building, complete, a self-propelling hydraulic dredge, as stated in our advertising columns. Capt. C. S. Riche, U. S. Engr.

BREAKWATER, SUPERSTRUCTURE.—Buffalo, N. Y.—Bids are asked until Feb. 25 for constructing concrete superstructure on breakwater here, as stated in our advertising columns. Maj. T. W. Symons, U. S. Engr.

NAVAL SUPPLIES.—Norfolk, Va.—Bids are asked until Feb. 5 for furnishing a quantity of lumber, pipe, pipe fittings, valves and motors at the navy yard. A. S. Kenny, Paymaster Gen., U. S. N., Washington, D. C.

LIGHTHOUSE TENDER.—Washington, D. C.—Bids are asked by the lighthouse board until March 2 for constructing the twin-screw steel steam lighthouse tender "Larkspur." Rear Admiral F. J. Higginson, U. S. N., Chn. Bd.

WHARF.—Bremerton, Wash.—Bids are asked until March 2 for constructing a timber wharf, 16 x 298 ft., at the Puget Sound Naval Station. M. T. Endicott, Chief Bureau Yards and Docks, Navy Dept., Washington, D. C.

DREDGE AND SNAGBOAT.—St. Augustine, Fla.—Bids are asked until March 7 for building, complete, a steel hull, stern wheel, combined dredge and snagboat, as stated in our advertising columns. Capt. C. H. McKinstry, U. S. Engr.

GATES AND GUARDHOUSES.—Bremerton, Wash.—Bids are asked until March 2 for constructing two entrance gates of iron or steel and two stone guardhouses at the Puget Sound Naval Station. M. T. Endicott, Chief Bureau Yards and Docks, Navy Dept., Washington, D. C.

STRIGHTENING RIVER.—Utica, N. Y.—Bids are asked until Feb. 21 for straightening and turning the Mohawk River, requiring about 551,000 cu. yds. of earth, clay, etc., for new channel, making about 187,000 cu. yds. of earth embankment and small amounts of masonry work, etc., as stated in our advertising columns. James F. Mann, Chn. Mohawk River Comrs; Stephen E. Babcock, Ch. Engr.

## U. S. TROPICAL POSSESSIONS.

MACHINE SHOP, ETC.—Kaual, Hawaii.—It is stated that the McBryde Sugar Co., Ltd., Wahiawa, Kauai, wishes to secure catalogues, price lists, etc., of tools and appliances for a machine and blacksmith shop.

SEWERAGE SYSTEM AND PAVING.—Havana, Cuba.—Maj.-Gen. Leonard Wood, Governor-General of Cuba, has cabled us under date of Jan. 28, asking us to announce that the contract for sewering and paving in the city of Havana will be awarded, after open competition, to the lowest responsible bidder, without special privileges to anyone, and that advertisement for proposals will be made at an early date. Contractors desiring to bid would do well to begin investigations in Havana at once. A newspaper report from Havana, dated Jan. 26, stated that the government has made arrangements with Mr. Dady, the American contractor, to purchase all his rights in law and equity in the project for sewering and paving Havana, for $250,000. This sum will be reimbursed to the state by the successful bidder for the contract. The Ayuntamiento has been instructed in a letter from Governor-General Wood to prepare an advertisement for bids. According to the plans, bidders will be obliged to deposit 5% of the amount of the contract, and the successful bidder must deposit 5% more before beginning the work. Mr. Dady, under the new conditions, has no more rights than other bidders. He is reported to have said that he was satisfied with the awards, and will enter the competition for the contract. Lieut. W. J. Barden, U. S. Engr., Ch. Engr. of Havana.

BUILDINGS, ETC.—Porto Rico.—Our correspondent writes us that President McKinley has directed that $200,000 be appropriated for school buildings. About 50 frame and four large buildings will be erected, the latter to be fireproof. Construction will probably begin at once. Competitive plans will be asked for the four large buildings, which will cost about $25,000 each. Dr. M. G. Brumbaugh, Comr. Education, San Juan. It is probable that about $500,000 will be appropriated for new roads and public buildings. The insular legislature has passed a resolution requesting the U. S. Congress to make appropriations for harbor work. The city of San Juan is considering the issue of $800,000 for general improvements.——A report states that Ramon Valdes, of San Juan, has secured the concession for developing the waters of the Rio Plata for power and lighting purposes, to include a dam, canal, pipe lines, etc. Wm. Hunt, Secy. of Porto Rico, San Juan.——Jose E. Denton, of San Juan, who has the contract at $7,500 for removing the wreck of the "Cristobal Colon," will begin work Feb. 1. Capt. C. A. F. Flagler, U. S. Engr., San Juan.——A report states the legislature has decided to issue $3,000,000 in bonds, the proceeds to be loaned to the planters for improving their plantations, etc.

## FOREIGN CONTRACTS AND EXPORT NEWS

DRAINAGE WORK.—Glasgow, Scotland.—Bids are asked until Feb. 18 for the excavating, concrete and brick work for the proposed drainage at Dalmuir. J. Lindsay, Clk.

BOILERS.—Kirkcaldy, Scotland.—Bids are asked until Feb. 15 for furnishing a dry-back marine boiler 11 ft. 6 ins. x 14 ft. Kennedy & Jenkin, Engrs., 17 Victoria St., Westminster, London.

WATER-WORKS, ETC.—Lincoln, Eng.—Bids are asked until March 4 for sinking a deep well for the proposed new water supply. Percy Griffith, Engr., 54 Parliament St., Westminster, London.

ELECTRIC METERS.—Launceston, Tasmania.—Bids are asked until April 8 for furnishing and installing 500 electric meters. Specifications and conditions may be secured from John Terry & Co., 7 Great Winchester St., London, E. C., on payment of one guinea. Wm. Corin, Cy. Elect. Engr., Launceston.

RAILWAY.—Guatemala.—W. W. Bierce, Ltd., Hennen Bldg., New Orleans, La., has been awarded the contract by Snyder & Barthel, L.-L.-G. Bldg., New Orleans, for 6,000 tons of 55-lb. steel rails for the Guatemala Northern Ry. extension of 64 miles, for which the Central American Improvement Co., New Orleans, has the contract.

ABATTOIR, ETC.—Huesca, Spain.—Bids are asked by the secretary of the municipality of Huesca for furnishing the equipment for an abattoir, to cost about 280,007 pesetas. The Ministry of Industry and Public Works, Madrid, is asking for bids for a lighthouse of the fourth order at Canet Head. Bids will soon be asked for a telephone system for Huelva, Spain.

POWER PLANT AND TRAMWAY.—Sao Paulo, Brazil.—Reports state that Sao Paulo Ry., Light & Power Co., Ltd., which recently completed a power plant and tramway, entirely equipped with American machinery, will soon let contracts for extending the properties, giving the city about 150 miles of electric roads. The company is already building a power plant, etc., at Parahyba, which with the work now completed and proposed will cost about $7,000,000. Hugh L. Cooper, Engr.-in-Charge of Const'n.; F. S. Pearson, Ch. Engr., 840 Cable Bldg., New York.

RAILWAYS, ETC.—Europe.—Bids are asked until Feb. 14 for furnishing the materials and for constructing a complete overhead trolley system for Brighton, Eng. T. B. Holliday, Tramway Engr., Brighton.——The Didcot, Newbury & Southampton R. R. Co., Fowler & Baker, Engrs., 2 Queen Sq. Place, London, S. W., proposes to build a line between Winchester and Southampton, to cost $4,000,000.——We are informed that the Compagnie des Tramways Electriques d'Angers, France, has the concession for a tramway. A railway from St. Jean d'Angely to Saintes, 31 miles, to cost $2,700,000, without cars, etc., is proposed.

RAILWAY MATERIALS.—Russia.—It is stated that the Russian government will have to spend at once about $17,000,000 for repairing the Chinese Eastern R. R., as a result of the recent troubles. It is thought that in about six weeks the government will purchase in America about $2,000,000 worth of hoisting machines, derricks, dumping cars, narrow-gage track, construction tools, picks, shovels, etc. Contracts for structural material and equipment for the Port Arthur arsenal will be let in February; estimated cost, about $1,500,000. Permanent show-rooms of American machinery have been established at Vladivostock, Port Arthur and Blagowestschensk by Wm. Toritch, of the Wm. Toritch Co., exporters of American machinery, 13 William St., New York, N. Y.——It is reported that James P. MacDonald, 35 Nassau St., New York, has transferred the construction of the Ecuador railway to another American syndicate, and has gone to London to organize an Anglo-American, to undertake extensive railway construction in China.

MINING, RAILWAYS, ETC.—Siam.—Our correspondent writes us, under date of Dec. 14, that the Kabin Gold Mines of Siam is a reorganization of the old company which worked those mines. The old company came to grief financially, and the new organization has sent an expert to Siam to report upon the mines, and upon his report will depend largely whether the company will proceed. Ingle, Holmes & Co., Broad St. House, E. C., London, are interested. Much building is going on in Bangkok and quantities of light-gage corrugated iron are used; also cheap hinges and window and door fastenings are used, as well as other cheap building hardware; also quantities of wire nails are imported and considerable quantity of cement. Cement sells for $3.25 per cask and wire nails at 3 cts. per lb., including a 3% duty. Also there is a small sale for fire bricks and fire clay. It is believed that if light steel girders and posts were introduced to take the place of wood, which is now being used and which is very expensive, it would meet with approval. Practically all these goods are now supplied from Germany, England, Belgium and other European countries. Mr. Payne, of the Westinghouse Electric & Mfg. Co., Pittsburg, has been here studying foreign business, and his company will no doubt secure its share in the supply of electric materials for the new Bangkok tramways about to be built by the Siam Electricity Co., Ltd., Copenhagen, Denmark. About 10 miles of grooved rails will be required and also rolling stock. A part of the machinery has already been ordered from the General Electric Co. Lighting plant, recently ordered by the company from Germany, and especially a large high-priced engine to operate the 400-K-W. German dynamo, is giving much trouble and they will not likely care to again try the experiment of buying machinery from amateur builders of electrical machinery. There are some 123 miles of railway being built by the Siamese government at present, which require bridge materials, rails and equipment. The government railway engineers in charge of this work are Germans, and there is no chance for American materials, as the question of cost of goods and quality of goods and time of delivery is of no consideration. The Baldwin Locomotive Works recently bid for supply of locomotives; their bid was lower and time of delivery just one-half that of the German makers, but the order went to Germany. L. E. Bennett, U. S. Vice-Consul and Mech. Engr., Bangkok, is interested in efforts to push the sale of American goods in Siam and it is suggested that catalogues, price lists, etc., be sent to him.

POWER PLANTS.—Italy.—We are informed that Felix Gallavreti, Civil Engr., Milan, has asked for a 30-year concession for drawing water from the Tessin in Vigevano, for power purposes, to cost, with a canal, about $1,000,000.——G. B. Dal Lago, Vincenza, Italy, has been granted a 30-year concession for taking water from the Agno and Torazzo Rivers for power purposes, work on the plant to be completed in 2½ years.——The council of Thaon, The Vosges, France, has decided to put in an electric plant.——Engineers Maschesi and Basser have asked for permission to draw water from the Arsa, Rusnianca, Italy, for furnishing power, etc., to Vogagna.——Bids are asked until April 1 for furnishing the materials, etc., for a new power plant for Amsterdam, Holland, to cost $2,200,000, noted in our last issue. Address the Manager of Electricity, Achterbungway, 213, Amsterdam.——Bids are asked by the Grand Dutchy of Luxemburg for a power plant and water-works for Rumelange.——Bids are asked until Feb. 18 for materials for an electric plant for Wimbledon, Eng. F. Barnes Spencer, Elec. Engr.

## INDUSTRIAL NOTES.

J. G. POLLARD, 141 Raymond St., Brooklyn, has just shipped 48 sets of firing tools for the public schools, Washington, D. C.

THE STANDARD PAINT CO., New York, is moving its general offices this week to larger quarters at 100 William St. The warehouses remain at 81-83 John St.

THE RELIANCE MACHINE & TOOL CO., Cleveland, has appointed Mr. Chas. K. Thomas, formerly special representative of the "Railway Age," as General Sales Agent.

THE KEUFFEL & ESSER CO., Chicago and New York, had the only exhibit at the recent convention of the Illinois Society of Engineers and Surveyors. It included a variety of engineering and drawing instruments, drawing materials, etc.

THE DETROIT GRAPHITE MFG CO., Detroit, in addition to an exceptionally good American business, is doing considerable exporting. It has just shipped a large order to Mexico.

THE AMERICAN BRIDGE CO., New York, has a contract from the New York Central & Hudson River R. R. Co. for two draw bridges to be operated by gasoline engines; one to be located near New Hamburg, N. Y., and the other one near Little Ferry, N. J. Both are through plate girder bridges with double track.

THE CASE MFG. CO., Columbus, O., reports the following recent sales: One complete 15-ton trolley, Rarig Engineering Co., Columbus; one 75-ton 65-ft. span motor crane, St. Louis Transit Co., St. Louis; one 8-ton 23-ft. jib-crane, Gerst Bros. Mfg. Co., St. Louis; one 5-ton 18-ft. jib-crane, Humphreys Mfg. Co., Mansfield, O.; one 3-ton 30-ft. jib-crane, Abendroth Bros., Port Chester, N. Y.; one 2-ton 13-ft. jib-crane, P., C., C. & St. L. Ry., Dennison shops; one 10-ton and one 12-ton 23-ft. jib crane, New Jersey Fdry. & Mach. Co., Passaic, N. J.; one 75-ton 47-ft. span 4-motor crane, St. Lawrence Construction Co., Massena, N. Y.; one 40-ton 3-motor trolley complete, Rarig Engineering Co., Dakrum, O.; one 12-ton trolley complete, Pittsburg Steel Foundry, Pittsburg; one 2-ton 36-ft. span 3-motor crane, F. Hammer Paint Co., St. Louis; one 30-ton with 5-ton auxiliary 4-motor crane, The Copper King, San Francisco; one 25-ton trolley complete with connections, Totten & Hogg Iron & Steel Co., Pittsburg; one 15-ton 5-motor crane, Canton Roll & Machine Co., Canton, O.; one 15-ton 2-motor and two 5-ton 2-motor trolleys complete, Scullin-Gallagher Iron & Steel Co., St. Louis; one 4-ton 3-motor 18-ft. span traveling crane, Otis Elevator Co., Chicago; one 15-ton 56-ft. span 3-motor crane, Niles Iron & Sheet Co., Niles, O.; one 30-ton 47½-ft. span 3-motor crane, 2½-ton auxiliary hoist, Bullock Electric Mfg. Co., Cincinnati; two 50-ton 60-ft. span, one 25-ton 39-ft. span and one 25-ton 24-ft. span 4-motor traveling cranes, for Chicago & Alton Ry., Bloomington, Ill.; one 15-ton 41-ft. span 3-motor crane, National Gear Wheel & Foundry Co., Allegheny, Pa.; one 5-ton 11-ft. jib-crane, American Rolling Mill Co., Middletown, O.; one 10-ton hand-power traveling crane, McCloud River Electrical Power Co., San Francisco; one 5-ton 26-ft. span 3-motor crane, National Tube Co., McKeesport, Pa.

## Mail Delivery Notice.

**The first pages of Engineering News go to press on Monday each week, and the last pages, including "Wants," "Proposals" and "For Sale" cards, about Wednesday noon. All papers for Boston, Philadelphia, Washington and Greater New York should be received Thursday morning. All places East of the Mississippi should be reached by Friday afternoon.**

**If your paper is not received promptly, make a complaint in writing to your local post-office officials. This will cause an investigation, and the complaint will finally reach the office where the delay occurs.**

The New Advertisements on Page XXI ("Wants") and Pages XXII--XXIII ("For Sale") May Interest You.

THEY GROW——Possibly They Bring Results——TRY THEM

Su

PERSO
Obit
ENGIN
Com
NEW
Tra
CONST
Con
Hall
Stre
Elec
Brid
Hull
Wat
Sew
Gar
Stre
Ma
Mis
U.
For
Con
Ea
INDUS

Mr.
St. Alb
Major
has bee
Mr. L
the Sew
Mr. C
of the
Mr. I
Machin
Mr. U
ordered
Mr. J
General
Ry.
Mr. C
of Syra
resigne
Mr. J
been a
of Pate
Mr. V
has bee
resigna
Mr. C
from t
Cavite
Mr.
Meadv
Mahon
Mr.
Transp
R. R.,
Mr.
the Sa
has re
Mr.
Wester
house,
Mr. J
of the
become
tric Ry
Mr.
gineer
practic
sas Ci
Mr. J
Birmin
the Ga
mingha
Major
has be
Waterv
Steel V
Mr.
Russia
placing
for Vl
Mr.
branch
Cal., o
visit t
Mr.
cian o
take c
Bulloc
Capt
A., ha
Co., a
C. L.
Mr.
Secret
caster,
of tha
Matt.
Mr.
New Y
will b
road o
will b
at Bu